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Original Articles.

SOME NEW STUDIES OF THE OPIUM DISEASE.¹

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A S a preface, I wish to express my emphatic dissent against the common use of the word *habit*, in describing the opium disease. The popular meaning conveyed by this term is some state or condition voluntarily acquired and retained, with the certainty of being thrown off at any time at the will of the patient. This view assumes a knowledge of the physiology and psychology of the brain and its functions that is not yet attained. Hence the use of the word is incorrect, wrong, and contradicted by the facts in the clinical history of each case. It also conveys a false impression of the nature and origin of such cases, and is a word to which different meanings will always be given. No other word is more misleading and confusing, when applied to opium, alcohol, and other border-land neuroses.

Beyond all question, the toxic use of opium and its alkaloids is rapidly increasing. Only about 50 per cent. of opium and morphine manufactured is required by the legitimate demands of medicine and pharmacy. The enormous balance is consumed in some unknown way. Comparative estimates make the number of opium cases in this country over a hundred thousand. Whether this is correct or not, it is evident that the number is very great and largely concealed, and many of them are very hopeless and diffi-

cult to treat. The natural history of such cases indicates a steady, progressive degeneration on to death. Recovery is rarely spontaneous, and without the aid of applied science. Up to the present all clinical studies have been confined to the symptoms and treatment, starting from some indefinite point after the opium addiction begins. The old superstition of a moral origin, and of some willful, wicked impulse, is accepted as the first original cause. Writers, and even specialists, seldom go back into the early etiology, or inquire what conditions or forces led to the first use of opium. The object of this paper is to trace some recent facts which throw new light on this unknown stage of etiology.

From a careful clinical study and grouping of the history of a number of opium cases, it is evident that a large proportion have a distinct *neurotic diathesis*, or, more literally, have inherited from their parents some condition of brain and nerve defect which favors and predisposes to the development of neurotic diseases. A more careful study of these records shows that in some cases an *opium diathesis* is present, or a special inherited tendency to use opium. Here are two conditions which influence and favor this disease. It is a well-known fact that a large proportion of all nerve and brain diseases appears in children of neurotic and defective parents. Such children have received some special tendency and predisposition favoring the growth of nerve diseases, springing into activity from the slightest causes.

The latency or activity of this diathesis will depend on certain conditions of life and surroundings, which in many cases can be traced. In some instances the diseases of parents reappear in the children, in others in allied diseases, and not infrequently these defects pass over and reappear in the third generation. Often

¹ Read at the Philadelphia County Medical Society, January 27, 1892. For discussion see page 156.

Paris and Philadelphia.

such defects are dormant, and only break out from the application of some peculiar exciting cause. Thus a hysteric mother and paranoic father were followed by three children. One was an alcoholic, the second was a wild, impulsive temperance reformer, the third was a sad, depressed, melancholic man. In the third generation opium and alcoholic inebriety, insanity, pauperism, also feebleness of mind and body, appeared. These varied forms of nerve diseases all had a neurotic diathesis as a basis, and the different phases were the direct result of different exciting causes. These facts are numerous and well attested, and so uniform in their operation that it is entirely within the realm of possibility to predict that, from a knowledge of the diseases of the parents and the environment of the child, certain forms of degeneration and diseases will appear with almost astronomical precision. This term neurotic diathesis covers a vast unknown field of causes which extend back many generations. The evolution of brain and nerve defects can often be traced through the realms of environment, nutrition, growth, and development. Medical text-books and teaching which fail to recognize this, give very narrow conceptions and strange exaggeration of the influence and force of many insignificant and secondary factors in the production of disease. The opium-taker has often this neurotic element in his history. It may be traced back to his ancestors, or it may be associated with brain or nerve injuries, cell-starvation, faulty nutrition, auto-intoxications, brain strains, or excessive drains of nerve force. A train of predisposing causes may have been gathering for an indefinite time back. Then comes the match which kindles or fires the train of *gathering forces*. This same train of exciting causes may not explode, because the germ soil is absent. Opium in all forms is given daily, and yet only a comparatively small number of cases become addicted to its use. Why should an increasing number of persons take opium continuously for the transient relief it gives? Why should the effects of this drug become so pleasing as to demand its increased use, irrespective of all consequences? The only explanation is the presence of a neurotic diathesis, either inherited or acquired. The existence of a special opium diathesis has been doubted with supercilious contempt by many writers. Any clinical study of cases will show the error of such doubt. The notes of a few cases which have recently come under observation are illustrations by no means uncommon, and indicate the concealed factors of disease in many instances.

In Case I the mother was a secret morphine-taker, the father was a hypochondriac and melancholy clergyman. Two children followed, who were highly educated and healthy. One, a boy, became a physician, and at thirty suddenly began to use morphine and soon became a chronic case. The other, a girl, was well up to her marriage, at twenty-four, when she began to use opium, for no apparent reason.

Case II, reported by the late Dr. Parrish. Both parents used opium for sleep and neuralgia, and died, leaving three children under five years of age. They were brought up in temperate families, and had no knowledge of the opium addiction of their parents. One, at twenty, continued the use of morphine after it had been given for some intestinal trouble. The second child suffered from dysmenorrhœa and began to take morphine for this trouble, and became a morphine maniac. The third child was a druggist, who at thirty was a confirmed opium-taker.

Case III. Both parents were neurotic, and probably opium-takers. Both died, leaving an infant child,

which was excessively irritable and peevish. By accident, morphine was used as a remedy, and from thenceforth the child would become delirious unless morphine was given daily. All efforts to break up its use failed, and for five years increasing doses were used constantly until the child's death.

In Case IV, five children of unknown parentage were all opium-takers; all lived in different conditions and had different occupations. Two began the use of opium from some bowel trouble. Two have been under treatment, and relapsed (?).

The relief which this drug brings on all occasions, and its impulsive use, are unmistakable indications of a distinct opium diathesis. I believe a careful clinical study will reveal many such instances.

There is a large class of opium cases in which a complex diathesis exists—particularly following inebriety and various forms of brain exhaustion. Often alcoholics will use opium irregularly and transmit to their descendants a diathesis which very commonly favors the use of this drug. Thus the alcohol diathesis frequently becomes the opium craze, with but slight exposure. Both of these disorders are rapidly interchangeable. The children of opium takers may turn to alcohol for relief, and *vice versa*. It is clear that the moderate use of alcohol produces a degree of degeneration that frequently appears in the next generation as predisposing causes to the opium or allied diseases. Clinical study of cases brings ample confirmation of this. The children of both alcohol and opium inebriates display many forms of brain degeneration. The paranoics, criminals, prostitutes, paupers, and the army of defects, all build up a diathesis and favoring soil for the opium craze. Descendants from such parents will always be markedly defective. They are noted by brain and nerve instability, hyperæsthesia, and tendency to exhaustion; also extreme pain from every degree of functional disturbance, with low powers of restoration, inability to bear pain, and suffering from mental changeability, impulsiveness and drug credulity, etc.

These characteristics are prominent, and mark a neurosis that quickly merges into the opium disease. Yet a minority of these cases show a sensitiveness in the effects of opium that prevents them from using it. I have seen a neurotic patient become dangerously narcotized by the use of half a grain of solid opium. Some of the alcoholics and other narcomaniacs have exhibited an incompatibility to opium that is often startling. The emesis and prostration, and the brain stimulation which approaches and becomes hyperæmia from one or more doses, are familiar to all. This intolerance precludes the use of the drug, and is recognized with alarm by the patient. On the other hand, when the effects are rapid and marked, relieving pain or restoring the disturbance of the functions with no other than a pleasing sense of rest and cure, a dangerous diathesis should be suspected. While the physician recognizes the constitutional incompatibility in one case, he ought not to overlook the abnormal attractiveness of the drug in the other. The dose of morphine which gives the first complete rest, or calms the delirious excitement, or relieves the neuralgic pain or the digestive disturbance, soon calls for its repetition, and many physicians will unconsciously sanction and advise its use. Thus, far more fatal conditions are cultivated and roused into activity. In all neurotic cases, the use of opium in any form when given, should be concealed and watched with care. If a special predilection for this drug appears, equal care and skill should be exercised to divert and change it. Opium should

only be used from a knowledge of the nature and character of the case. I have seen the most disastrous results from the reckless use of morphine with the needle. Recently, a man to whom morphine was intolerant was cut and stunned by a falling plank in the street. The surgeon gave him a hypodermic of morphine and ordered him to the hospital. He died in a short time from opium neuroses. Police surgeons often make this mistake, giving morphine that from some unknown reason becomes fatal.

There is another class of opium takers in which abnormal nutrition seems to be the most active factor in the causation. The neurotic or opium diathesis is not apparently present, and opium taking dates from some nutrient disturbance. Such cases are very commonly sufferers from dyspepsia, derangement of the liver and bowels. They have a deranged appetite, headaches, cramps, thirst, and fever at times, with nausea. They are anæmic and hyperæsthetic, and complain of varied pains and neuralgia. These cases are evidently ill nourished, and, in all probability, suffer from imperfect digestion, assimilation, and elimination of food products and waste material. Poisonous compounds and auto-intoxications form sources of serious trouble. The brain suffers from fatigue and pain, the cells are imperfectly nourished, and congestions, complex neuralgias, nerve irritation and instability follow. For this condition opium is almost a specific paralyzant. These cases are found among the over-fed, the under-fed, and those who neglect common hygienic rules of living. Cases of the over-fed are usually epicures, gormands, and persons living sedentary lives, and eating at all times and places. Dyspepsia and derangement of the bowels and kidneys make them drug-takers; then follows opium in some form. Defective elimination and auto-intoxications are always present. The under-fed are usually misers, or persons very poor and very neglectful of themselves, or paranoics who have some food delusion. They are practically suffering from cell and tissue starvation and nutrient debility. The same dyspepsia and bowel derangements follow. Then follows drug-taking or special foods, and soon opium is discovered and adopted as a remedy. The same poisonous waste products appear from deranged assimilation; also, elimination and the nerve centers are deranged by these new and dangerous chemical compounds. The class of persons who, from simple neglect, become diseased are often the very poor and ignorant, or some division of the great army of borderliners, who live both mentally and physically on the very frontiers of sanity and insanity. Such persons clearly suffer from many and various forms of auto-intoxications, and this is proven inductively by the result of eliminative treatment. In all of these cases of nutrient neglect, many favoring conditions encourage the use of opium. These cases are numerous and comprise a large part of the invalids, hypochondriacs, and chronic drug-takers, who are seen in our offices and at the dispensaries. They are all practically suffering from faulty assimilations, and faulty eliminations and the irritation of retained poisonous compounds. Opium is a remedy of positive force in covering up the protests of the defective cells and irritable nerves. Often these cases are concealed, and are partly the result of previous disorder, and partially acquired from the effects of opium.

Next to this class of nutrient sufferers who become opium-takers, are those who have some entailment of disease or injury. In their history it will appear that some stage of invalidism was present, dating from braine, nerv, or bodily injury. Fevers, heat, or

sun-strokes, brain shocks from any source which are followed by unconsciousness, or marked mental perturbations, with exhaustion, and also a profound lowering of all the vital forces. These and other events have left damaged functional and organic activities, manifest in various neuralgias and physical disturbances.

The use of opium conceals and covers up this trouble. Many veterans of the late war have become opium maniacs for the relief of their pains and sufferings, and this is often concealed where it might possibly peril the procuring of a pension. The pension bureau should recognize the use of opium as a natural sequence and entailment following the disease and injury in the service. In Prussia, both alcohol and opium inebriety are treated as diseases when occurring in the army or civil service. The suffering and hardships growing out of the war has been the exciting cause of a great many opium cases. Many persons who have no special nerve diathesis in their history, after some severe illness, injury, or mental strain, exhibit a degree of nerve instability and feebleness that is significant of serious organic change. Such persons manifest perversions of taste, with delusions of foods and medicines, and are on the border-lines of narcomania, ready to use any food or drugs which will bring even transient relief.

The use of opium is always perilous. Why all these and similar cases do not become opium-takers is owing to the absence of some diathesis inherited or acquired.

We can see some of the many complex causes favoring brain and nerve strain, with rapid exhaustion and degeneration, and the interchangeability of nerve diseases, in which the use of opium is only another form of the same disease. But we cannot yet trace the early causes and cell-conditions which develop the opium craze. This morbid impulse, like the delirious thirst for water on a desert plain, completely dominates all reason and so-called will-power, and every consideration of life and surroundings. It is more than an accident, more than a failure to reason and act wisely; it is a disease, an organized march of dissolution. The demand for opium is only a symptom; the removal of opium is not the cure. Some central brain degeneration has begun and is going on. Narcomania, a morbid thirst for any solids or fluids that will produce neuroses, is the general name, and opium mania is only one member of this family.

In this study the fact is emphasized that the opium disease appears most frequently in persons who have a neurotic and opium diathesis, and also in persons who are suffering from nutrient disturbances, and those who are invalids or have some entailment of previous disease and injury; also that certain diseases and symptoms seem to furnish favoring soils for its growth and development. While these are but faint outlines of many unknown facts, they are urged as starting points from which to base other and more accurate studies. The medical treatment from this point of view is very suggestive. Obviously the removal of the opium is not the cure. The various methods of removal detailed with great exactness, as if they would apply to each case, are unfortunate reflections of the failure of the writers, and are based on the assumption that all cases are the same, and the removal of opium is the great essential in the treatment. Basing the treatment on the clinical study of the case, it will be evident that where an opium diathesis exists, the withdrawal of opium should be very gradual. The treatment and

surroundings should be arranged with great care and exactness. Such persons should live in an institution for years, or be under constant medical care. The danger of relapse and the future of such cases will depend entirely on the conditions of life and surroundings. Rapid reduction and any heroic treatment is never permanent, even with the consent of the patient. Specific, faith cures, or any measures that promise speedy cure, are failures from the beginning. The road back to approximate health is straight and narrow, and only along lines of applied science. Where the history of a *neurotic diathesis* is present, the withdrawal of the opium should be equally slow.

More attention must be paid to the brain and nerve nutrition. The removal of opium may be followed by the appearance of very serious disorders, such as epilepsy, hysteria, complex neuralgias and paranæsthesias, alcoholism, and various other neuroses. The slow withdrawal of opium enables one to discover and anticipate these neurotic troubles which have been masked before. In one case, suicidal melancholy; in another, hyperæmia of the brain, with delusions; in the third, irritation and delirium; in the fourth, hysterical spasms appeared when the opium was removed. I have seen two cases of general paralysis suddenly spring into great activity after the opium was taken away. This condition was not suspected before. Alcoholism is a very common sequel after the removal of the opium. *Cocaine*, *chloral*, and almost every drug that has narcotic properties are also very common entailments. While these are extreme cases, they are likely to be formed at any time. Great care should be exercised in using other narcotics to lessen the irritation from the withdrawal of this drug. Foods and tonics should be given. These cases require the same general treatment as neurasthenia and other states of brain exhaustion. They are drug-takers, and will resort to anything for relief. They are secretive, and require more care and more mental remedies, with long, exact hygienic surroundings.

Where the opium addiction has apparently come from bad nutrition and faulty elimination, with auto-intoxication, the treatment is very hopeful. A long preliminary course of baths, mineral waters, and tonics should precede the removal of opium. Then the opium may be removed at once, without the knowledge of the patient. In proper surroundings with frequent baths, little danger of relapse or suffering will follow. Careful study and treatment of nutrition and digestion will fully restore the case, and relapse seldom occurs except from failure or neglect of the surroundings.

In the last class, where opium is taken and apparently follows from the entailment of some injury or disease, or the exhaustion of old age, a preliminary period of treatment seems to be required. Often the opium can be abandoned at once for some milder narcotic, and from this, by gradations, discontinued entirely. Full knowledge of the diseased states present will always suggest the lines of treatment. In some cases the opium should not be removed; its diminution and concealment is required. In others, its rapid removal is essential. Many varied and difficult questions will appear in these cases. The more accurately the diseased states, also predisposing and exciting causes, the diathesis, and varied influences which have caused opium to be used, are studied, the more accurate the treatment. As in many other diseases, the causes may be anticipated, also neutralized and prevented. Opium-taking should be seen

as a symptom; remove or break up the cause, and this symptom disappears.

Routine treatment, either by slow or rapid reduction of the opium, is not wise. The substitution of other narcotics is equally unwise. In a certain number of cases the withdrawal of opium only unmasks more serious diseases, and is positively wrong. A case of general paresis is now under treatment for the opium addiction. Before this opium addiction began, the patient caused great distress by his delusions and extravagantly strange conduct. This treatment is wrong. A rheumatic woman of seventy is going through the same course to be free from opium, which has made life tolerable for ten years past. The treatment of opium mania is something more than the application of means and remedies for withdrawal of the drug with the least suffering. The symptomatology and organic lesions often date back to other causes more complex than opium. The treatment must begin by their removal. The general or special diathesis must be treated; the nutritive disorders, intoxications, and starvations must be recognized and removed. The influence of pathological states from previous disease and injury must be ascertained and treated. The power of environment, climate, occupation, and idiosyncrasies are also powerful factors to be considered.

These are the essential facts and conditions which must enter into the practical treatment. Among the many important problems, that of prevention promises the greatest possibilities. A recognition of the neurotic diathesis and other predisposing causes would enable the physician to successfully guard against its approach.

The successful *stamping* out of both this and the alcoholic disease will be a reality in the future.

It is evident that the opium disease is still an undiscovered country, and the few student experts have not yet passed beyond its frontiers. This disease is all about us and may invade our homes and firesides any time, and hence demands recognition and most careful study; above all, ethical and moral levels. Its laws of growth, development, treatment, and curability all follow the great highway of evolution and dissolution.

RAPE OF A CHILD.

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RAPE has in all ages and in all climes, been regarded as a most monstrous crime. In some States it is punished by death. The act is so repulsive to the feelings of the refined and the uncouth alike, that the rapist is always in imminent peril of being lynched before an investigation can be had by legal process. In this way it is not at all unlikely that many times innocent men are sacrificed to the heat of a mad mob. Of the fiendish nature of the crime there can be no question. It is so revolting to the spirit of manhood, that deploring, as all good citizens must, the wild acts of the mob, yet there is in them the spirit of decency which all people admit, for, after all, the right sentiment is abroad, and the judgment of the common people is to be depended upon. Whatever may be said of rape in general, may be emphasized when the victim is a child under the age of consent. To many people there is a doubt as to the sanity of a man who will violate the person of a child, and yet there can be no question but that the crime is far from uncommon. The popular and even common professional belief is that no man in his

right mind will attempt to have carnal knowledge of a child with whom intromission is not physiologically possible. But men do violate children of tender years, and it will be the province of this paper to point out some reasons why base men do attack the cradle to satisfy a lust that is hellish when not held under control.

When a man of mature years is charged with the monstrous crime of rape by a little girl, his friends fly to his rescue and begin a system of character blackening, which is as detestable as is the efforts of the complainant's friends to form a mob to take summary action. In the first place, it is not beyond comprehension to conclude that the accused is guilty. At any rate, he may be, and in the course of a fair, impartial trial, he can have an opportunity of establishing his innocence. It should never be right to decide the case on the ground that the character of the accused is in so much higher moral scale that, therefore, the accusation is not true. As a rule, it is the daughters of poor people who are made the victims of the lecherous. When a man violates the daughter of a good family, the vigilance committee holds a meeting at which important business is transacted. There are a number of reasons why the charge of rape made by a child is not and may not be blackmail.

1. Men who have burned the sexual candle very fast in youth, or who have lived a fast life, or have abused their procreative powers, are liable to find the ability to keep up the gait gone. The desire to have sexual congress is as great nearly as ever, but the flesh is weak. These men fear the danger of contracting diseases at the shrines where virtue has a commercial value. The wife at home has lost the power to call up the passion as of yore; and so it happens that the whilom man seeks to find some means of keeping the fire going after the fuel is running low. The fear of disease and the danger of publicity which is sure to come to those who patronize houses of bad odor, cut off one of the most prominent objects of easy access. Then comes the giddy girls who are in the market for a consideration, and the added protection which is supposed to come from men who have a bank account. The danger of having a family in prospect soon settles this avenue of relief. Then comes the little girl whom a few pennies or equally cheap favors will silence, and the work of villany is inaugurated. But, says the apologist, "it is not possible for a man to have connection with a child." This fact has no real connection with the case, for the reprobate is not so much after the means of having sexual connection as he is after the means of securing and maintaining an erection and enjoying the excitement afforded by contact with the soft skin of the abdomen and thighs of the child. The effort to force entrance is most likely of seldom occurrence, that is, to the extent of injuring the parts more than by denuding the mucous membrane. I have known old men, and men of families, to have carnal knowledge of children for months, and yet never so much as cause the loss of a drop of blood to the innocent victim of their baseness. It is only the demoniacal brutes who cut innocent victims in their effort to satisfy a lust that is most monstrous when not under some control. It is questionable whether the desire for sexual gratification, aside from the act of emission, is possible; but there can be no doubt but that the desire for dalliance is given up to, and the sexual function is so far changed as to make the mental effort to call the powers, or even memories, of youth back of greater concern than the mere effort to main-

tain an erection and have an ejaculation. It is the mind that is kept in the groove more than it is the bodily want that demands relief.

2. There is a very common fallacy abroad among a certain class of people to the effect that connection with a virgin will cure certain venereal diseases. As this consummation is devoutly to be wished for, it is almost certain that the effort to get rid of an incubance that is a great burden, prompts deeds of violence which Western justice does not overlook in its efforts to combine right with celerity. Where this senseless notion came from is more than I have been able to discover. It is not improbable that it arose from the fact that when the discharge of gonorrhœa is at its height, the act of sexual intercourse will diminish the discharge for a time, when the flood gates will open with a vigor that often terrifies the novice. Be the explanation what it may, there can be no doubt but that the reason for the crime is seated primarily in a wish to get rid of an unwelcome disease.

3. The crime of rape is many times suggested by the anatomical structure of the female child. If a healthy, well developed female child and a mature woman stand before an observer, while the clothing is removed, it will be found that the child will exhibit more of the genitalia than the woman will. Before puberty the sexual organs are subservient to the needs of the urinary system, and for that reason the labia majora are very prominent. So it may happen that the individual, ignorant of the anatomy of the child, and with malice in his heart, is liable to be deceived into thinking intromission is possible; and when the attempt is made, the crime is done or the passion is beyond control. I have not the least doubt but that a misjudgment as to the possibility prompts the inhuman acts of butchery which occasionally shock the world.

There can be no apology for rape when the victim is a child. The punishment which the various States inflict suggest that every case be tried without the intervention of prejudice. The disparity in social position should not be permitted to jeopardize the accuser, nor should it stand in the way of a careful investigation of the acts of the accused. The medical man to whom most frequently there comes summons to examine the victim, the desire to see justice dealt out in large parcels should not make of him a doubting Thomas of a discoverer of unexisting facts. Corroborating evidence being essential, it must not be thought on the one hand that every spot is a large wound, or on the other hand need there be looked for wounds of monstrous size in cases even where assaults have been repeatedly made.

The question of what constitutes entrance is one which, in the hands of the wary lawyer, assumes proportions which often surprise the medical man who comes upon the witness stand with his books and often brief experience. As a matter of fact, an entrance is accomplished when the labia are so separated as to permit the male organ to reach the vaginal opening. It is not necessary to entrance, that there should be injury of the parts. It is a well known fact that conception can occur without intromission. The presence of living spermatozoa in contact with the vaginal opening may occasion impregnation. In rape, as in other crimes, the intent is the essence of the crime. In the normal condition of the parts the labia are together, and he who reaches the vaginal opening, with intent to have carnal knowledge of the female, is guilty of rape. It matters not whether the child has given consent or not. The law fixes an age prior to which consent cannot be given.

In trials of rape cases too much prominence is given to the hymen. The absence of the hymen neither proves nor does its presence disprove the charge. So many causes may occasion the destruction of the hymen that its absence or partial development creates no surprise to the student of gynecology. It often happens that when it is present in its entirety it is capable of withstanding a good deal of force, so that partial intromission may often be accomplished without its destruction. The absence of seminal stains is made to assume mountainlike proportions by keen lawyers. I am of the opinion that it is the exception to find them in the cases of children, while the opposite condition is found in adults.

The simple fact that the law governing these cases requires corroborative evidence, does not make it incumbent upon the medical man to find proof positive when the act was only one of many that preceded it. The color of the parts and the condition of relaxation, which latter is always present where frequently-repeated acts have occurred, must weigh far greater in the opinion than can an abrasion which may be only very superficial in its extent.

The shocking revelations made a few years ago compromising an array of the titled and untitled nobility in London, were in the line of unbridled lusts gone mad. Of the truth of the charges there never was a denial, but the old contest between Right and Might ended in the same old way. The little girls whose poverty had given them over to the debauchery of the depraved wretches had no power, and so nothing was done toward filling the penitentiary. This sodomy of these titled scamps was the last desperate effort to whip up a bankrupt sexual power that was gone. The fact that natural intercourse may have become impossible, must never be lost sight of in the investigation of cases where gray hairs are ruffled by the suspicion of lecherous wrong doing.

Society Notes.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Stated Meeting, January 27, 1892.

The President, JOHN B. ROBERTS, M.D., in the Chair.

SOME NEW STUDIES OF THE OPIUM DISEASE.¹

WAS the subject of a paper by DR. T. D. CROthers.

DISCUSSION.

DR. THOMAS J. MAYS: This theme has been one of intense interest to me, but I do not feel prepared to discuss the subject. There is, however, one point to which I should like to refer, and that is the relation between opium-taking and pulmonary consumption. We know that there is a strong affinity between alcoholism and consumption, and I would ask Dr. Crothers whether he has observed a similar relation between opium taking and pulmonary consumption.

DR. JOSEPH HOFFMAN: Looking at this subject from the medical side, I would say that I have taken some trouble to ascertain the frequency with which opium is prescribed by the general practitioner. The ordinary prescription-file of the drug stores will show that three out of five of the prescriptions contain opium in some form or other, and I think that more

than a little of the responsibility for opium-eating lies at the physician's door. It is prescribed without any attempt at cure, for opium has few curative effects, especially in acute disease.

The question arises, When should opium be used in surgical work? In shock opium will not effect a cure, except in so far as to relieve pain, and if pain is the only thing to be remedied, often we have the remedy in opium. In cases where the pain is self-limited there is a great divergence of opinion as to whether opium should be used or not. In abdominal surgery we must refuse to use it. In these cases opium, instead of being beneficial is harmful. Although it lulls pain, it produces much after-discomfort. There may be cases in which you cannot do without it; these are the undiscovered cases of opium-eating. In these cases the surgeon has to choose the lesser of two evils. Opium is injurious not only from its physical effect, but also from its moral influence. Take a patient broken-down with pain, add the pain of operation, and give a drug which destroys the power of self-control, and you introduce a semi-hysterical element which causes unending trouble.

In surgery there are better anodynes than opium. I have found the hydrobromate of hyoscyne to be preferable; it does not cause constipation, and thereby increase the tympany, as does opium; its only bad effect is to diminish secretion. By avoiding the use of opium we secure benefit by toning up the patient. In shock, strychnine will at once put the patient to the point of enduring the pain without any subsequent discomfort.

DR. M. PRICE: The responsibility of the opium habit can, I think, be referred directly back to the physician. He begins by relieving the pain, and not only does so, but tells the patient what he is using for that purpose. I cannot speak in regard to the neurotic diathesis, but some of the best developed, and apparently best balanced, patients that I have had, so far as external appearances were concerned, were addicted to the opium habit and some of them are still addicted to it. If the physician is forced to give opium, he should give it secretly.

As has been said, opium, by its stupefying influence upon the nervous system, covers up and masks the symptoms. The physician also is lulled into a feeling of security, and does not recognize the destructive changes that are taking place, and is only awakened when he finds his patient absolutely dying. I have seen cases of appendicitis where the physician thought that the patient was improving, and yet the abdomen was full of pus and the patient dying. The opium had not only quieted the patient, but also lulled the doctor into a feeling of security. Not only in appendicitis, but in other surgical conditions, where the pain and discomfort is so great as to call for the use of opium, something should be done instead of giving opium, unless the patient is past relief; there opium is proper enough. In abdominal surgery we have come to the firm conviction that opium is uncalled for except where the opium habit has been established.

DR. J. P. CROZER GRIFFITH: I stand here to-night feeling somewhat alone, since I intend to take issue in some respects with what has already been said in the discussion, and to consider the matter from the standpoint of the physician, rather than that of the surgeon. I agree fully with nearly all that was told us in the papers of the evening regarding the dangers of opium, and assent as well to the statements of Drs. Price and Hoffman, that in nearly every case of the opium habit the physician is probably responsible.

¹See page 151.

At the same time one cannot but be impressed with the feeling that one of the laity, strolling in here to-night, would leave with the thought that opium is an unmitigated evil, a drug which should never be employed under any circumstances whatever, inasmuch as it never did anything but harm. Every unprejudiced physician can only regard this as radically wrong. I say it after mature deliberation, and not on the spur of the moment, but still I say it, that were I compelled to select one drug from the entire list in the Pharmacopœia, and confine myself to its use alone, I would unhesitatingly choose opium. And though in this I am at variance with what we so often hear uttered in discussions in this Society, yet, I trust, I am not an antiquated foggy, and I know I try to keep abreast of the times. It has been urged that opium rarely cures disease, but only relieves symptoms, at the same time that it disguises them. I should like to inquire how many drugs in the Pharmacopœia really cure; certainly there are very few. As educated physicians, we hesitate to say that we have *cured* our patients. All that we expect to do is to guide our cases to recovery. I have no reference in this connection to the employment of surgical interference. Were it true that opium never had any powers but those of relief, there would, therefore, be no objection to its use on this score. Well aware of the dangers of the opium habit, I would hesitate long before beginning the employment of the drug in cases which were certain to run a somewhat chronic course, yet in which there was hope of recovery. Dujardin-Beaumez has made the statement that thirty days' continuous use of opium will make an habitué of any one. In the light of what has been said in the latter of the two papers of the evening, this is perhaps an over-statement. It at least expresses the opinion of an excellent French authority.

There are cases in which the greatest fanatic will probably admit that it is our duty to administer opium in some form. Among these are hopeless cases of cancer. It is true that the drug gradually loses its effect, and that the dose must constantly be increased. But in no other way can existence be made even tolerable. I believe, too, that it is almost a sin to omit the employment of opium in the last stages of many cases of phthisis. The statement has been made in text books that opium is poison to patients with phthisis. While this may be true in theory, it is eminently untrue in practice. Of course, I have no reference to phthisis in the early stage. There is no question that in this stage we should defer employing it, trying other measures for relief, and devoting our attention to the cure of the disease.

While it is true that opium may occasionally cause—perhaps it is better to say *be followed by*—suppression of urine, dyspnoea, and other unpleasant and dangerous symptoms, we should not totally abandon its employment on this account. I have a patient in whom 5 drops of tincture of nux vomica is always followed by unpleasant evidences of the physiological action of strychnine; but I shall not on that account refuse to give nux vomica in other cases. I have seen retention of urine follow the application of turpentine stupes; but shall not for that reason abandon their use. So numerous drug-idiosyncrasies exist, that the man who inordinately fears them will never give anything, and had better retire from the profession.

As there are a number of gynecologists present, I am ready to admit at once that I understand very little about abdominal surgery. But as a physician it is my duty to have some opinions about peritonitis. In former years, before the diagnosis of pathological

conditions of the abdomen had so degenerated that it became necessary to cut the patient open in order to discover what was the matter, there were physicians who possessed sufficient diagnostic acumen to recognize peritonitis without this interior inspection. Dr. Alonzo Clark was one of these. Unfortunately for him, he died before he had the full opportunity of learning from the later lights concerning the avoidance of opium in peritonitis and the proper treatment of the affection, and he claimed that in some way it was partially curative. It was his custom to administer opium in very large doses in this disease. Doubtless it was very stupid of him to persist in this practice; but, strange to say, his cases recovered. It may, after all, not appear so strange when we call to mind that the use of depletives in peritonitis, including laxatives in some cases, had been in vogue up to that time, and with results far inferior to those of Dr. Clark's. For my own part, I have yet to hear of any method of treatment which supersedes the administration of opium in this affection—not as a calmate agent, but as a curative one as well. Of course, there are cases in which every physician would counsel operation; but this is in no wise a sanction to indiscriminate laparotomy.

With regard to what has been said about opium in peritonitis beguiling the physician into a sense of false security, it is, of course, necessary that the attendant should have his wits about him, and realize that his drug is liable to disguise the symptoms by relieving pain. I think, however, that there are other factors than sensation of pain to indicate the existence of danger-signals.

Then, again, we must not forget that it is often impossible to obtain consent for an operation, however desirable this procedure may appear. In such cases we wish to be familiar with some method of treatment other than the employment of the knife. We shall sometimes be surprised by the recovery under the administration of opium of cases which we had deemed hopeless without operation.

DR. W. M. CAPP: It is to be remembered that the physician is often hurriedly summoned to patients with acute symptoms and in great suffering, and it is from these that relief is sought. Generally speaking, it is well to say that we should sit down and study the case, to discover the cause of the suffering, and remove it, so that relief will naturally follow; but practically something more speedy is demanded, and a narcotic may be useful to tide the patient over what would otherwise be a critical period of suffering.

Dr. Crother's paper was very interesting, but I do not know that we can agree with him in substituting the word *disease* for the word *habit* in all cases of opium addiction. I think that in many cases the use of opium is simply a habit, in no respect different from the alcohol or tobacco habit. There are some persons with such weak will-power that they go through life, dominated by a habit of some kind. The remark that the physician is largely responsible for the prevalence of the *improper* use of opium is rather too general. It is too sweeping an assertion to say that the physicians are responsible in all cases. It has also been intimated that from the frequency with which opium is prescribed we can easily account for the large quantity which is imported. This is too broad a statement to emanate from a Society of this kind. Let me refer to one single fact. It is generally known that almost all patent medicines contain opium, and that there is no country in which so large a quantity of these nostrums is consumed. In their manufacture a large quantity of this drug is

used, and it is but a short step from the use of narcotic patent medicines to the direct use of opium. There are many ways other than by the prescriptions of physicians, by which people become addicted to the use of opium.

DR. EDWARD JACKSON: The power of opium to cover up symptoms has been mentioned. This is something more than the power to prevent pain by an action on the peripheral nerves, or on the centers themselves. I have seen this illustrated in some cases of insufficiency of the eye muscles. I have one patient with hyperphoria of six centrads, who has suffered much from headache and other effects of eye-strain. If she takes three-fourths of a grain of opium, the hyperphoria entirely disappears. She is not hysterical and is not an opium habitué; she goes many weeks, and even months, without a single dose. For several hours after taking the opium the conditions of nervous action are so radically changed that the hyperphoria no longer exists, so far as we can in any way discover it. My attention was called to a similar case by my friend, Dr. Charles H. Thomas. In these cases there is certainly some peculiar effect on the coördination of nerve impulses, so that both the pain and also its cause are for the time removed.

In regard to the lessened importation of opium, it occurred to me that this might be connected with the introduction of hyosine and some of the coal-tar derivatives, and their wide use by both the profession and laity; also with the attack led by the abdominal surgeons on the use of opium in what was formerly regarded as its peculiar province, the abdominal inflammations.

DR. WILLIAM H. WELCH: A celebrated physician of this city once said he could count on the fingers of one hand all the drugs that he had found of real use in his practice, and he would place opium at the head of the list. Now I feel very much the same way. Of course, I recognize the fact that opium, like alcohol, is greatly abused; but I would not be willing to give up either on that account. I have met with a number of persons who have become habituated to the use of opium, but I have seen only one case in which I have aided in breaking off the use of the drug. This patient was a nurse who had contracted the habit voluntarily. He began the use of morphine to induce sleep, after having met with a bereavement in his family. I think he also suffered from neuralgia. He gradually increased the dose up to two grains a day. After continuing this for two years he decided to give it up, and so he gradually diminished the dose for four days, when he discontinued it entirely. To relieve the pain in his extremities, he took antipyrine and also bromide of sodium to promote sleep. After abstaining from its use for several months he went on a visit to New York, and while there was taken with cholera morbus. He applied to the nearest drug store for relief, and the druggist gave him a mixture containing opium in some form. From this time he returned to the use of morphine, and soon reached a daily dose of four grains. After continuing the use of the drug now for two years longer, he again resolved to break off the habit, and this time placed himself under my care. It is unnecessary to recite in detail the symptoms that followed, but the extreme muscular weakness was very surprising, especially when we consider that the daily dose was only four grains. In a few days after discontinuing the drug he became absolutely helpless; he could not feed himself, and could not hold in his hand even a

glass of water. He became delirious. In the course of two weeks he began to improve, but it was three weeks before he was able to resume his duties. I should add that he took bromide of sodium very freely, and some critics have suggested that the extreme muscular weakness may have been due to this drug. He, however, showed the weakness before the bromide was taken. He took as much as two hundred and forty grains of the bromide daily for several days. I know nothing of his family history, but so far as the individual himself is concerned, there appears to be no neurotic element in the case. It has now been two years since he stopped the drug, and he tells me he has not returned to its use. But these people often practise so much deception that I cannot be absolutely sure on this point.

DR. T. B. SCHNEIDEMANN: I recall a valuable little book, now out of print, by Professor Fiske, of Harvard, on alcohol and tobacco. The title page bears the legends, "I. It Does Pay to Smoke." "II. The Coming Man will Drink Wine." The author is at some pains to define the difference between a stimulant dose and a narcotic dose, the former being such an amount as nourishes or facilitates the normal nutrition of the nervous system, restoring its equilibrium, enabling it with diminished effort to discharge its natural functions. Such a dose, moreover, has no evil after effect—"reaction"—which belongs only to a narcotic dose, the term over-stimulant being a misnomer, and imported into physiology from *a priori* reasoning. As a stimulant, he declares that these substances diminish the friction of life, and are useful adjuncts to civilization, and that the dose does not have to be increased, and that their use may be dispensed with at any time without exciting morbid craving. Fiske's views are essentially those of Anstie.

DR. T. RIDGWAY BARKER: There is one point in Dr. Crothers' paper that impressed me, and that is the importance of hereditary predisposition. This belongs to what is known as the interchangeable neuroses. If the histories of cases are more carefully examined, we shall find that inherited tendencies have a great deal to do with the use of narcotics and stimulants.

I think the physician should not wholly escape from the charge of too frequently prescribing morphine and other narcotics. It is not uncommon in cases associated with pain for the physician to take from his hypodermic case tablets of morphine, and instruct the patient to take one every hour or so, according to circumstances. The patient is aware of the nature of the drug and may acquire the habit.

In cases of post partum hemorrhage one-drachm doses of tincture of opium certainly have a happy effect. Even where the patient is almost exsanguined, she may recover.

I was glad to hear the recommendation of Dr. Crothers in regard to the gradual diminution of the dose, thus disturbing less markedly the nervous system.

DR. HOFFMAN: Very little weight can be attached to the recommendations or argument that certain men used opium twenty or twenty-five years ago with good results. There is no doubt that in certain acute painful diseases opium is indicated, as in rheumatism, the passage of a stone, and in neuralgia. When the surgeon talks about peritonitis, he talks about something that he knows, while the general practitioner talks about something he imagines. Nine tenths of the cases of so-called peritonitis are not peritonitis at all. When the abdominal surgeon opens the abdomen, he

makes a peritonitis, for the reparation is due to inflammation. In these cases, no matter how great the swelling and pain, it passes away under the use of salines or calomel. I think that here we have the vantage ground of the argument, for we know what we have done, and we have the results.

DR. M. PRICE: I should like to call attention to the statement in regard to the general practitioner and peritonitis. When the physician gets a case of peritonitis that he thinks is going to die, he refers it to the surgeon. The very men who are boasting of their twenty or thirty cures of peritonitis are the men who are referring to the surgeon their fatal cases with quarts of pus in the abdomen. When we cure from 93 to 97 per cent. of the cases that they give up, I think that we have the best of the argument. A case was recently reported from Buffalo of a girl ten years of age treated with morphine for fourteen days, the daily dose finally reaching twenty-five grains. The temperature had disappeared five days before this dose was reached. They then gave her a saline; they had given salines before, but the child vomited it. I cannot understand such peritonitis. Here must be some neuralgic or nervous condition mistaken for peritonitis.

DR. WERNER: The remarks of Dr. Crothers seem to reinforce my position that, when indicated, opium should be given with great care, and in such a way that the patient does not know that he is taking opium. Some years ago I was called to see a child one month old. I found it in convulsions, with contracted pupils; the child had previously been well. I asked if they had given it any medicine. They at first denied that they had, but subsequently admitted that a neighbor had given the child a dose of medicine for colic. The child died in less than twenty-four hours, and subsequent investigation showed that it had received an eighth of a grain of morphine.

Another case that I recall of is that of a young girl of strumous diathesis, who had been treated for various troubles, and finally, going to a gynecologist, a stem pessary was introduced. She came to me; I removed the pessary, and found the uterus and broad ligaments swollen and extremely sensitive; there was menstrual pain. She was placed at rest, with suitable treatment, and improved. Being a working girl, she is compelled to be much on her feet, and soon all the old pains returned. I told her that if she could rest she might be made comfortable, but that otherwise it would be necessary to remove the diseased appendages. She refused operation, and the last time I saw her she told me that a friend promised to give her some powders, which she thought contained morphine. I explained the danger to her, but in spite of that she is taking the morphine; I do not know what the result will be.

These cases are sufficient to show the necessity of calling a halt. Prescriptions should not be allowed to be renewed at random. The cases for the use of opium are rare, and should be carefully selected, and the physician should give the dose himself.

I fully agree with the remarks made by Drs. Price and Hoffman regarding the use of opium in abdominal work, and feel certain that many lives are saved by having given up its use; it has certainly often lulled both patient and physician into a dangerous feeling of security until it was too late. I recall one case of septic peritonitis, which I saw in consultation. Although the patient was comfortable after calomel and salines, I knew from the pulse and temperature that there was pus, and suggested operation. The family physician refused operation unless I could show him

that pus was present. I agreed to remain in attendance, provided, opium was not given. On Wednesday he gave the first dose of opium, for what reason I do not know; there was no pain, and there were daily movements. After the opium, distention of the abdomen occurred, and death the following Sunday. In these days, when we are trying to have cleanliness in everything, why should we shrink from giving salines and clearing the bowels of any foul material? Why should we block the bowels with opium when we know that the products are reabsorbed? These are questions which I should be glad to have answered from the other side.

DR. CROTHERS, of Hartford, Conn.: The interest which this subject has excited is very pleasing to me. The point which I tried to make clear is that these are neurotic cases, either acquired or inherited, and that we should treat them as such, and bear this fact in mind in our use of opium. If we have a neurotic case, we should remember this predilection to the opium habit.

Dr. Mays was among the pioneers who exemplified the close connection between alcoholism and consumption, and between opium-taking and consumption. Phthisis, alcoholism, opium taking, and a host of other affections, are neurotic conditions, and interchangeable one with the other.

I have strongly objected to the word habit, because its exact meaning is not understood. We use the word in its common sense and not in its scientific sense.

There are many reasons for the discrepancy between the quantity of opium imported and the quantity used legitimately. It shows that opium-taking is increasing, and that opium is used in various secretive ways.

I think that there are no physicians in general practice who will regard opium as a bad remedy. I think that the statement that it is one of our chief remedies will be confirmed by all. It is, however, clear that it should be given with great caution, and its use concealed from the patient's knowledge. We cannot dispense with it under any circumstances. My principal point has been to call attention to the neurotic character of these cases and not to disparage the use of opium.

With regard to the treatment of opium cases, we come to a wide field which the general practitioner is not quite ready to enter. The routine treatment of diminishing the quantity of opium as the only plan of cure employed must be abandoned. Opium must be retained or diminished according to the case. In some cases it would shorten life if the opium were diminished. In the large proportion of cases, however, the opium can be removed. The routine plan of diminishing the opium gradually or rapidly is largely empirical. No one should undertake the opium treatment without knowing the diathesis and condition of his case, and then the question of the removal or diminution of the opium becomes clear and the result satisfactory.

FOR chronic endometritis, Polk washes out the uterine cavity with bichloride, 1 to 5,000, dilates under ether, and packs the uterus with cheese cloth strips, soaked in bichloride solution, 1 to 500, and then in hot water. The vagina is then plugged with gauze. Any ensuing pain is relieved by hot abdominal fomentations. The plug is removed in a week, and the patient allowed to rise. Profuse discharge ensues.

NEW YORK ACADEMY OF MEDICINE.

SECTION ON ORTHOPÆDIC SURGERY.

Stated Meeting, January 15, 1892.

SAMUEL KETCH, M. D., Chairman.

THE DISAPPEARANCE OF LARGE PSOAS ABSCESSES.

DR. HALSTEAD MYERS presented a case of lumbar Pott's disease to illustrate the disappearance of very large psoas abscesses without material interference with the general health during the process.

In this case, which had a strong family tendency to tuberculosis, the abscess appeared early, had gradually increased in size, but after an attack of measles, it had become much larger, so as to fill both iliac fossæ, and form pouches in both inguinal regions, as large as a man's fist. At this time, the liver was slightly enlarged, but there never has been a trace of albumen in the urine. Eight months later, though still anæmic, the child felt well, had an excellent appetite, and the liver had regained its normal size. Absorption was rapidly progressing.

At present, the child has a temperature ranging between 98.4° and 99.6°, and has a few enlarged cervical glands; but he plays hard all day, has a good appetite, and feels well. The abscesses have almost entirely disappeared, and recovery seems assured.

DR. NEWTON M. SHAFFER said that he had seen this case from time to time, and could testify to the large size of the abscesses. This case would certainly have been considered by some of their colleagues a fit one for operative interference, notwithstanding that such an operation would necessarily have proved rather serious, on account of its extent. As usual, under proper mechanical treatment, the abscesses had disappeared.

DR. V. P. GIBNEY said that in connection with this subject, he desired to report an instructive case. About fifteen years ago, a boy was brought from the West to the hospital with disease of the lumbar spine. The brace at that time in vogue at the hospital was applied, and the child did well for two or three years, when he experienced some pain in the left thigh, and a tumor appeared in the left iliac fossa. The speaker had advised the systematic use of hot water douches over the parts, and the result of this treatment was considered at the time, to be quite brilliant. He had only just learned the sequel of this patient's history. Shortly after the disappearance of the abscess from the iliac fossa, and while still wearing the spinal support, an elongated tumor made its appearance in Scarpa's space, and then burrowed down until it nearly reached the inner condyle. There was then some redness and tenderness, so the hot douches were resumed, with the effect of causing an entire disappearance of the tumor. Nothing further occurred until several years afterward, when, after a fall or strain of some kind, a large and tender tumor made its appearance very suddenly on the outer side of the thigh, at the junction of the middle and upper thirds. This was accomplished by pain and considerable constitutional disturbance, and a surgeon incised the abscess, removed some bone detritus, and irrigated the cavity. Since then, although the sinuses have been washed out daily with bichloride or mercury solution, and afterward with peroxide of hydrogen, and then dressed with sublimate gauze, they have been discharging pretty constantly, and there have been occasional symptoms of sepsis. The remnant of the sac can still be felt in the iliac fossa. The tumor which appeared on the outer side of the thigh was probably

nothing more than the old abscess deflected by the concussion of the fall.

Dr. Gibney said that he had narrated this case, because it was one of those in which the abscess had disappeared under what was considered to be good treatment, and yet he was not entirely satisfied with the treatment. He had seen many cases in which the abscess had disappeared in this way, and he was glad when this occurred, but sometimes he could not help feeling that it might be better if he could, under thorough antiseptics, remove this pus by a surgical operation, and so relieve the patient from this constant menace.

THE USE OF IODOFORM IN THE LOCAL TREATMENT OF STRUMOUS JOINT DISEASES.

This was the title of a paper by DR. J. D. BRYANT. In this paper the author used the terms "strumous disease" and "tuberculous disease" synonymously. For practical purposes the products of tuberculous joint disease may be said to be located in the joint cavity and its lining membrane, and in the peri-articular tissues, associated with this membrane. The rice and melon seed bodies in these diseased joints are often infected with the tuberculous agents. In the present paper the author excluded from consideration disease of the integument, and of the immediate subcutaneous tissues.

The preparations of iodoform, which had been used by the author, were 10 per cent. solutions, with ether or glycerine. The ethereal solution was easily obtained in an aseptic condition; it flowed freely through needles of small caliber, and by its rapid diffusibility quickly deposited the iodoform upon the disease products. But this very property of rapid diffusibility made it objectionable on account of the liability of producing constitutional effects, and because of the irritation produced by the fluid, which made the injections extremely painful, and often gave rise to circumscribed abscesses. A solution of iodoform in sterilized glycerine or oil had the advantage of not producing these unpleasant constitutional effects, and of not being painful when injected; but, on account of its viscosity, it was necessary to employ needles of large caliber. It was well to remember that all iodoform solutions are prone to undergo chemical decomposition, especially when nearly saturated, or when exposed to sunlight. Camphor has the property of increasing the solubility of iodoform in these fluids, so that a saturated solution of camphor in olive oil will dissolve 6 per cent. of iodoform.

No definite rule can be laid down as to the amount of iodoform which can be injected without danger of producing constitutional effects, thus: 1½ grains have been known to give rise to these symptoms, while in other cases no such result has followed the introduction of 150 grains. It is generally considered that 30 grains of iodoform may be injected; but the difference of action of the ethereal and the glycerine solution must be borne in mind.

The author then spoke of the different manifestations of iodoform poisoning, those cases being considered the most dangerous in which there was a rapid and compressible pulse, either with or without fever. Then the presence of iodoform in the human system is evidenced by a disagreeable taste; the introduction of a silver piece into the mouth will immediately develop a garlic taste, which, according to Poncet, is characteristic of the presence of iodoform. Another test is the production of a canary-yellow color when calomel is mixed with the saliva.

The author related in detail the histories of two cases to illustrate the action of the iodoform in the treatment of joint disease. In the first one, the patient, aged eighteen, was admitted to Bellevue Hospital on February 17, 1891, with a history of having suffered from disease of the knee-joint for three years, during which time he had been treated in various ways without benefit. The synovial cavity was greatly distended with fluid; there was no special tenderness, and no increase in the temperature of the joint. There was much relaxation of the ligaments, and lateral motion on hyperextension. Walking did not cause pain; but there was so much relaxation of the lateral ligaments that locomotion was impracticable without confining the joint with a bandage or splint. On February 21 the joint was opened by a free incision, and its cavity thoroughly irrigated with a 1-2,000 solution of bichloride of mercury. Numerous melon seed bodies were evacuated, and the wound then closed. The wound healed by primary union, and the joint was diminished in size; but the previously over-distended soft parts remained fleshy, and the relaxed ligament made the joint very insecure. On April 1 the joint was opened in two places, at the site of the former incision and at the outer side of the quadriceps tendon, so as to lead directly into the outer pouch of the upward prolongation of the synovial cavity. After a thorough irrigation with 1-2,000 solution of bichloride of mercury solution, and the complete removal of numerous "rice seed" bodies, the cavity was irrigated with a 10 per cent. ethereal solution of iodoform, and the wounds closed as before. Primary union occurred without reaction. A portion of the synovial membrane was removed at this operation, and was sent to Dr. Biggs, who reported that there was no doubt about it being involved in the tubercular infection. From this time until May 1 the knee diminished in size, and increased in stability, yet the latter was not sufficient to render the joint secure. On May 9 a small quantity of fluid still remained in the joint, and as the patient was anxious to leave the hospital, 2 ounces of a 10 per cent. solution of iodoform in glycerine were injected directly into the joint cavity. There was no reaction, and after four or five days rest in bed, the patient was allowed to go around the ward, and on June 16 he was discharged. There had been no pain, tenderness, or effusion for two weeks prior to his leaving the hospital. Should a similar case come under his observation, the author said that he would prefer to open the joint at once in two places, clean out the cavity by irrigation and manipulation, and after perfect union had been secured, inject into the cavity 2 or 3 ounces of a 10 per cent. solution of iodoform in sterilized glycerine or oil.

In a second case, one of old knee joint disease, attended with considerable flexion of the leg and subluxation of the head of the tibia, occurring in a man twenty years of age, iodoform injections were begun after other recognized methods of treatment had failed to produce any noteworthy local improvement. The case was under the care of Dr. Girdner, of this city.

Eight drops of a twenty per cent. solution of iodoform in ether were injected at each of three separate points of greatest tenderness, into the deepest tissues, and perhaps some portion into the joint itself. Great pain was produced at the site of the injection, followed by numbness of the limb, and persistent nausea for twelve hours; and as the same symptoms followed a second injection, it was decided to substitute a twenty per cent. solution of iodoform in glycerine. This latter preparation caused less pain in the limb,

and no systemic disturbance. The injections were reported every two or three days. At the end of thirty days the joint was free from pain and swelling, the doughy feeling was gone, there was voluntary motion, and considerable weight could be borne by the limb. His general condition also kept pace with the local improvement, and at the present time the limb is nearly as strong as the other; there is considerable motion, so that the patient can walk on it without artificial aid. There can be no reasonable doubt of the tuberculous nature of the disease of the joint in this case, nor of the curative effects of iodoform.

DISCUSSION.

DR. A. B. JUDSON had failed to see the necessity or desirability of using iodoform in joints which are under mechanical treatment. In children thus affected, local medication may be ignored in favor of general treatment. He believed that the trouble is not so much a local fault, as a failure, for some reason or other, of the system to arrest the morbid action and repair the damage already done, and the system, rather than the affected part, should receive most attention. Mechanical treatment is a local application, but its indirect action is of the utmost importance in relieving pain, permitting sleep, facilitating locomotion, and promoting general well-being. It prevents the injurious effects of habitual trauma, and provides for ultimate symmetry and ability. Beyond this robust and reconstructive treatment, general medication is in order, reinforced by hygiene and an abundance of rich and wholesome food, in which cream and other forms of animal fat should be in excess. He believed the effects thus produced leave no room for the administration of anti-strumous injections.

DR. ROYAL WHITMAN said that he was surprised to hear the previous speaker express doubt as to the influence of iodoform on tuberculous processes, for it was not a matter of opinion, but of record: Bruns, Krause, and other investigators had shown that the membrane of tuberculous abscesses ordinarily consists of four layers: (1) an outer layer of thick porous tissue; (2) a layer of spindle cells in a state of active proliferation; (3) actual tuberculous granulations, and (4) necrotic and degenerated tissue. The two inner layers contain the tubercle bacillus. Under the iodoform treatment, it was found that healthy granulations sprang from the spindle cell layer, the bacilli disappeared, and the tuberculous granulations and inner layer were converted into a fluid, which might be absorbed, or withdrawn with an aspirator. Arens, in a recently reported series of 255 cases of tuberculous disease of various joints, states that under the iodoform treatment, forty per cent. showed very marked improvement. The most favorable cases were those of disease of the wrist and elbow. Trendelenburg had given up the use of the ethereal solution in his clinic, because of the pain produced. Instead, he uses a twenty per cent. solution of iodoform in oil, injecting about one teaspoonful at intervals of eight days. Krause uses a larger quantity—thirty to eighty cubic centimeters, injecting at intervals of three weeks. Bruns states that eighty per cent. of all abscesses may be made to disappear by the use of iodoform, and the specific action of this drug on the tubercle bacillus seems to be very generally recognized. Trendelenburg is now using oil and iodoform at the temperature of 100° C., with the object of making a solution of the iodoform in the oil, and of securing its deposition in a more finely divided state.

DR. SAMUEL LLOYD said that he had seen very remarkable results in his clinic, following the use of in-

jections of iodoform emulsion, both in joint difficulties and in tubercular adenitis; in fact, in the latter class of cases, they acted so satisfactorily that they had been used almost to the exclusion of operative measures. In some cases these tubercular deposits had been found in the lungs, the change was very decided after the injections, especially when these were pushed up to the point of producing constitutional effects. In one or two cases where operative procedures had been undertaken, and secondarily, injections had been used on a recurrence of the disease, the improvement was much more rapid than after the first operation when the iodoform was not employed. When using the iodoform injections in abscess cavities, the results had not proven good until the cavity of the abscess had been washed with hot water, or with some antiseptic solution. It is advisable then to inject the emulsion up to the point of causing some distension. Dr. H. Senn had had a similar experience, and in his recently published article on this subject he says he uses weaker solutions of iodoform, but in larger quantities.

Dr. R. H. SAYRE said that in using these injections he had felt the necessity of employing the iodoform in a more finely divided state, and therefore he thought it was an advantage to use the heated oil. He recalled two cases of suppurating ankle joint disease, one of which had been treated by injections of iodoform, and the other by injections of aristol. They had done equally well, and after about two months of treatment, the evidences of the inflammation had entirely disappeared and there was no pain or tenderness about the ankle. A splint had been applied to take off the weight of the body. In a case of tubercular inflammation of the thumb, he had obtained a good result from the injection of a ten per cent. solution of iodoform, and likewise in some abscesses.

Dr. H. L. TAYLOR said that he endorsed what Dr. Judson had said as to the value of mechanical treatment, and yet welcomed the method presented in the paper. His experience with iodoform in a few cases had convinced him that it had a specific action on the tubercular tissue. One of his most striking cases was that of a typically tubercular subject, a youth of seventeen years, who had been for some time under observation of Dr. DaCosta for suspected pulmonary disease. He had been hobbling about without crutches in spite of advice, for about one year after the development of tarsal disease, before he came under the speaker's care. He was made to use crutches, and the foot was immobilized with an apparatus. After some months, a sinus having appeared, on the advice of Dr. Abbe, injections of an ethereal solution of iodoform into the joint were begun. He could honestly say that the entire appearance of the affected parts was changed after one injection, and the subsequent progress of the case to complete cure, although slow, was steady. He had also used the iodoform emulsion in sinuses about joints, and he believed that this treatment produced beneficial effects independently of its antiseptic action.

The Chairman said that about two years ago, while visiting the clinics in Germany, he had seen a good deal of this treatment with the ethereal solution of iodoform, and he had been impressed with the great frequency of symptoms of iodoform poisoning, and with the general disregard of mechanical treatment shown by these surgeons. Still, he believed that in these iodoform injections we had a valuable adjunct to mechanical treatment, and one which had

not been sufficiently tested by American orthopaedic surgeons.

Dr. BRYANT, in closing the discussion, said that he had not had the slightest idea of substituting the iodoform injections for mechanical treatment, but he had thought that it could not fail to be a valuable adjuvant to this treatment, on account of its well known influence upon the tubercle bacilli, and because the injections could be so easily made. In the case of knee joint disease which he had described, where the rice and lemon seed bodies were in such large numbers he did not believe that mechanical treatment alone would have cured the case; in fact, the patient had had this treatment and had not been benefited by it.

CLINICAL SOCIETY OF MARYLAND.

THE two hundred and sixtieth regular meeting held in Baltimore January 15, 1892. Vice-President R. B. Norment in the chair.

Dr. L. McLANE TIFFANY read a paper entitled
SKIN DIMPLING IN CARCINOMA OF THE FEMALE MAMMA.

Dr. GEO. J. PRESTON read a paper on
HEMORRHAGE INTO THE SUBSTANCE OF THE SPINAL CORD, WITH REPORT OF A PROBABLE CASE.

Dr. HARRY FRIEDENWALD reported several cases of atropine intoxication from the use of eye drops.

Dr. R. M. HALL related a case of periodic insanity, associated with salpingitis of the right side, and asked about the advisability of removing the uterine appendages for relief of the mental trouble. Patient has had three attacks, one of which is now on her. They occur about the 11th or 12th of the month. Menstruation occurs at the first of the month. All that now remains of the salpingitis is an enlargement in the right side.

Dr. W. S. GARDNER: Although the attacks may not come on at the time of menstruation, yet the two things may be related. If these attacks come on every four weeks, and the woman has her menstrual period regularly, there is a relation of time if nothing else, and it is possible that by careful watching a connection could be established between them.

Dr. J. F. MARTENET: All physicians, and especially gynecologists, recognize that a condition may be developed about the uterus and its appendages which can excite acute mania. I do not rise to answer Dr. Hall's question, but to relate a case in my own practice. I attended the woman in confinement. Her husband confided to me that she was a very willful woman, and had had two attacks of acute mania, each associated with childbirth. During this confinement no symptoms of mental trouble appeared. On recovery she went on a visit to the South, her husband remaining at home. On her return some months later she was in a nervous condition, and finding some things at home not to her liking, she became worse. I saw her on Friday. By Sunday she was in a state of acute mania. Dr. Rohe, of the State Insane Asylum, believes the mental trouble to be due to uterine excitement, and suggests the removal of the ovaries. I am inclined to think it would be better to postpone the operation for a time. The woman should bear no more children.

Dr. J. E. MICHAEL: I think it is admitted by those who have given the subject attention, that the insanity in women due to the puerperal state, pregnancy and diseases of the genital apparatus, is a con-

dition which develops in persons predisposed to insanity by inheritance. A case came under my care last summer of a very intelligent young lady, who was married under rather unfavorable circumstances, a good deal of excitement attending the wedding. The groom took his bride to his home in Virginia. In one week from the time of the marriage he brought her back perfectly insane. Her family had heard of the removal of ovaries for the cure of insanity, and suggested this treatment. I opposed it because I did not think it an operation which ought to be considered under the circumstances. Previous insanity in the family was denied; but upon careful investigation I found that this young lady had suffered previously from insanity lasting several months; also that an uncle had been insane for a number of years; her father also had several attacks of insanity. I regarded it as hereditary insanity; the exciting cause being the excitement attending the marriage. I suggested an asylum, and was dismissed. Doctor Wilson got the case, and I was able to follow its course. In three months the symptoms gradually cleared away. I think there is great probability that insanity will again develop.

In Dr. Hall's case there was salpingitis in which the acute symptoms have passed away, and there is some residuum of the inflammation. The woman has become insane. Her uncle has been insane. She evidently has a predisposition to insanity, and this particular condition has been the exciting cause. I am very much inclined to the view that if this woman had been subjected to oöphorectomy or any other excitement, that insanity would have been the result. I do think the operation is indicated in this case more than in the case of any other exciting cause. I think the operation is decidedly contraindicated. The data given by Dr. Hall do not seem to show a definite relation to the menstrual flow. The case is to be regarded simply as one of insanity.

DR. J. H. BRANHAM: Dr. Michael, judging from the two cases related, seems to be opposed to operation for mental trouble. There is no question but that there are some cases in which benefit is derived from such operations. On the other hand there are doubtless a great many that would be made worse. I know of a case in which mental trouble developed in a young woman which was thought to be associated with some abnormal condition of the uterine appendages. Their removal was effected, and the woman developed violent mania just after the operation, and died in this condition. If cases are clearly associated with abnormal conditions about the uterus, especially attacks of melancholia occurring near the menstrual period, it seems, from the report of many cases, that great benefit is sometimes derived from these operations. As to the case in point, there is not enough information before the society to decide whether there is any relation between the menstrual flow and attacks of insanity. Cases of acute salpingitis tend to recovery very often if let alone, but frequently the apparent recovery is only a period of relief, and without any other infection from some exciting cause such as overwork, the trouble recurs and operation may have to be done. In Dr. Hall's case I think it would be better to wait and see if the mental symptoms cannot be cured without operation. Certainly an operation should not be done within three months.

DR. A. J. PRESTON: I think the point that Dr. Michael partly brought out, viz., the careful consideration of the personal and family history of the patient, is most important. There may have been cer-

tain things in the life of the individual which may have caused insanity, such as a period of trouble, emotional excitement, great poverty, or some other decided shock. Where the family history shows distinct heredity, I perfectly agree with Dr. Michael that there should, as a rule, be no attempt to cure by operation. The relationship between the higher brain centers and the genital organs is very close, and irritation of one may cause disturbance in the other. Some of these cases pointing to uterine irritation, amount simply to hysterical mania. I have seen two or three cases that were relieved temporarily by hypnotism. I saw one in Charcot's clinic suffering with violent mania, who was perfectly rational the next day after being hypnotized. Since then I have run across cases now and then in which the hysterical symptoms amounted almost to mania; these symptoms would subside at certain times and were closely related to some genital irritation.

Where there is no distinct hereditary predisposition, and where there is in the patient's personal history the evidences of decided genital irritation, and there is a chance of this irritation still continuing, it would seem to me that an operation would promise the best result. Cases of recurrent mania are among the most obstinate of all forms of mental diseases. If an operation would hold out any hope I should be in favor of advising it, and particularly early in the case. An operation later may do no good, just as in epilepsy an early operation may do good while a later one may not. As there is in the case under discussion some genital irritation persisting, and the attacks of insanity are periodic, I should be strongly in favor of an operation.

DR. MICHAEL, replying to the remarks of Dr. Branham said: I did not mean to go into the discussion of operating in cases where there is distinctly a relation between menstruation and the mental condition. I did not deem it a part of the present discussion. I should not hesitate to perform laparotomy in cases where these things exist.

DR. W. G. TOWNSEND related a case which was under his observation for about three months. A young lady, aged about twenty-three, had hysterical attacks periodically, and finally was the subject of acute mania. She had marked tenderness in the right ovarian region. She has been placed in an asylum and her ovaries removed. The results of the operation were not yet known to Dr. Townsend, but would be ascertained and reported to Dr. Hall.

DR. HALL: The tumor in the lady's side does not seem to trouble her at all. I would like to ask if there are any cases on record where perfect recovery has ensued after operation.

DR. PRESTON: There are a certain number of such cases on record in which operations have cured the mental symptoms. The operation has not been as successful as was hoped for, perhaps because it has been performed rather indiscriminately, but there are undoubted cases which have resulted very favorably.

W. T. WATSON, M.D., *Secretary*.

1603 N. BROADWAY, BALTIMORE.

VONDERGOLTZ recommends lysol (*Amer. Jour. Obstetrics*) as a good antiseptic in obstetrical practice.

A. H. SMITH says that in pneumonia the strain is on the right heart, and the indication is to dilate the blood-vessels and empty the veins into the arteries. Digitalis contracts the vessels, and is therefore contra-indicated.

The Times and Register

A Weekly Journal of Medicine and Surgery.

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TREATMENT OF PNEUMONIA.

J. L. GREEN, of Colorado, (*Med. Record*) recommends peroxide of hydrogen internally as a remedy for pneumonia. His use of this drug in pneumonia dates from 1888. He states that instead of going on to crisis the malady commences to fade away in one or two days, when this treatment is employed from the first of the attack. The object sought is the saturation of the patient with the drug as rapidly as possible. For this he gives one to three drachms of the fifteen-volume solution every three to five minutes for an hour or more; then continued every half or one hour until convalescence. If dyspnoea recurs, the drug should be given as at first. If nausea occurs, give less, or dilute the doses. In young infants crowd the medicine until vomiting occurs. Children, even a few weeks old, bear peroxide well, and in larger doses, proportionately, than adults. Cases seem to do better if mercurials are given freely for a day or two at the outset. Typhoid types should have oil of cinnamon given frequently. Fever may be controlled during the first few days by antipyretics, a small dose first, followed by small repeated ones. There is less use for cardiac tonics than when the expectant plan is followed.

As to results, he has treated one hundred and fifty-seven undoubted cases since 1888, with one hundred and fifty-four recoveries; the three deaths being those of an infant a few weeks old, seen late; a consumptive girl; and a woman with valvular heart disease, near its termination.

This is a good record, especially as Dr. Green states that his list included very young children, aged persons, drunkards and persons whose vitality had been impaired by excesses. Peroxide should not, however, be given to young infants to such an extent as to cause vomiting. This drug attacks the dead and partially devitalized epithelium, as any one may see if he washes his hands with the undiluted solution. On the delicate mucosa of a sick babe this effect might be sufficient to do serious in-

jury, especially as the symptoms might be marked by those of the disease; gastro-intestinal irritability being not infrequent in pneumonia. The really valuable effects of an emetic in infantile pneumonia can be obtained from ipecacuanha, without the danger which resides in peroxide solutions of such strength as would cause vomiting. Whether peroxide acted as a germicide in Dr. Green's cases, or simply as a source of oxygen, appears doubtful; that is, beyond the alimentary tract. The affinity of this substance to organic matter is such as to lead to the mutual destruction of both; and it is impossible for the agent to pass into the blood without change. Quite recently a claim has been made of very good success in treating pneumonia by the inhalation of oxygen, and a very limited amount of the gas may be absorbed from the stomach.

Whatever benefit has directly resulted from the administration of peroxide of hydrogen in pneumonia, can only be attributed to the local germicidal action of the drug in the throat, oesophagus and stomach. If these parts are infected with the pneumococcus colonies, and their action conduces in any degree to the fatal termination of the attack, in this case the peroxide is of benefit, but not otherwise. We do not say that this view is improbable; bearing in mind the remembrance of cases of pneumonia that proved fatal through the intractable diarrhoea and vomiting that were present. But as very excellent results have been obtained in treating pneumonia with heart tonics, red wine and raw beef, Bourbon whiskey, ergot, digitalis, quinine, veratrum viride, tartar emetic, blood-letting, and other remedies as diametrically opposite in their action as any in the *materia medica*, we cannot escape the conclusion that this extraordinary disease withstands the most pernicious treatment; and that a good constitution, with faith, will pull the patient through, in spite of the utmost efforts of the doctor to aid the disease and break down the vital powers of the patient. Whether we believe in the stimulant or in the sedative principle of medication, we must acknowledge that good results are reported by our opponents.

NEW diseases are making their appearance of late years, and old ones are assuming new features; queer atmospheric phenomena puzzle us, and our climate is apparently "out of order." The air is disturbed by mysterious influences, and slight ailments rapidly pass on to serious developments.

The modern applications of electricity are almost infinite, involving a continual production of this powerful force in enormous quantities; but, like all forces, it is indestructible. Therefore, as it is only discharged, and never destroyed, what becomes of it after it has done duty in the millions of carriers suspended in the air and buried under the ground? May not its subtle properties be in some measure accountable for the remarkable innovations and metamorphoses that characterize our climate and our health? The quantity of electricity evolved by thunderstorms is quite insignificant, compared to the stupendous amount generated and set loose daily, above, below, and around us, by modern electric apparatus; yet a

single mild thunder-storm produces strange effects in many individuals, human and animal, such as odd nervous symptoms, erratic movements, and premonitory fears. Is it not rational then to suppose that a never-ending discharge of the same power from countless artificial sources must exert gradual but unfailing changes in ourselves, our health, and our climate? Experiments have conclusively proved that plants rob the air of more than their share of nitrogen, in the presence of static electricity, thus promoting their own welfare at the expense of the air we breathe; yet the air is now never free from the *unknown* influence of this agent, and the earth must be always full of it.

LOUIS LEWIS, M.D.

Annotation.

WE have not yet collected enough material upon scarlatina to completely fill a special number. We trust that our readers will send in their letters as soon as convenient. Letters upon subjects of professional interest, medical climatology, the use of new or native drugs, etc., are always welcome.

IN another column will be found a summary of Dr. J. J. Berry's paper upon germicides. Dr Berry bases his argument against the sulpho-carbolate of zinc upon a laboratory experiment of Koch's, which showed that this drug failed to destroy anthrax spores. *Ergo*, it is useless in typhoid fever! Between premise and conclusion there is a missing link. Our claims for this drug are based simply upon clinical observation. When in a series of one hundred cases we find as an invariable result the disappearance of fetor from the stools, of tympanites, diarrhoea and delirium, with lowering temperature, we rest our faith on the drug. The question as to how these effects are produced is another matter; the principal point is that there is obtained from this drug effects that have not as yet been reported from any eliminant. Perhaps drugs of the latter class are better germicides; they are certainly not good remedies, in either typhoid or cholera infantum.

Letters to the Editor.

DISEASES PREVALENT IN THE STATE OF WASHINGTON.

CONSUMPTION: There are very few cases here. None seem to arise *de novo*. The Indians are scrofulous, and some die of consumption, I am told. Among the whites there are but few old families who have any tendency to phthisis. The first settlers were a hardy lot. Of those who come here with tubercles forming in the lungs, they die rapidly. None seem to recover; although from almost every other form of lung trouble most of the cases improve rapidly. Catarrh—nasal—is almost unknown in the severe form of the East. Before I came here I generally soiled from one to three handkerchiefs a day. Now one a week, and at most two a week, is all I need. This is the general rule.

2. Pneumonia is rare west of the Rockies. In the mountains and on the high prairies there are many fatal cases.

3. Rheumatism is not common here. I have seen a few cases. In the mines and lumber camps there are many cases.

4. Typhoid fever is very common in the cities and often runs a long, slow course. There is a tendency in all diseases to move slowly here.

The use of alcohol as a beverage is worse, if possible, here than in the East. Tacoma, with 40,000 population, has about one hundred and twenty five saloons. Puyallup has nine saloons, with a population of 3,000.

Female diseases are very common. Pelvic cellulitis, pyo-salpinx, etc., have many victims here.

THOS. W. MUSGROVE, M.D.

PUYALLUP, WASH.

INFLUENZA IN ELK COUNTY, PA.

I HAVE no faith in vaccination as a preventive for influenza, and if it were such, it could not be used to any extent; as all, excepting small children, have already been vaccinated as a preventive of small-pox, and, of course, individuals who have been thoroughly under the influence of vaccination, re-vaccination would have no effect. In the next place influenza is a disease that can not be prohibited from a return to the same patient under similar influences of the weather, as it is now admitted by nearly all, that these diseases are produced by atmospheric influences. I think the proper use of vaccine would be to vaccinate the weather.

My first knowledge of catarrh and influenza dates back to January, 1843, forty-nine years this month. During January, 1843, influenza and catarrhal fever prevailed in Alleghany county, New York, in a very severe form, and my investigations were made as a student and under my preceptor. It will be forty-seven years next March since I became acquainted with the disease through active practice.

Since the spring of 1846 my practice has been very extensive and continued in the counties of Elk, Clearfield and Jefferson, in the lumbering and mining regions, and has convinced and satisfied me in every respect that influenza and catarrh are produced by the condition of the atmosphere. When a doctor is called to a camp, from five to twenty-five miles from the nearest settlement, where no person has visited the camp or been away from it from early fall until late spring, to treat a case of influenza or catarrhal fever, in every case we find the atmospheric causes and no other. And, with proper treatment, they recover, only to have the disease reproduced by similar causes.

I am now treating many cases of influenza daily, and have a very severe case of catarrhal fever that has so far recovered as to be about again.

C. R. EARLEY, M.D.

RIDGWAY, PA.

DIPHTHERIA.

SINCE last August I have had charge of twenty-seven cases of diphtheria, and in three more, treated by another physician, the same local remedies were used as with my own cases. To comply with a request I will give a short account of my experience with these cases.

Stimulants and nourishing food were forced upon the patient at short intervals through the disease. In most cases iron and quinine were withheld until a late stage of the disease. Benzoate soda, corrosive sublimate and calomel were given in a considerable number of cases as eliminative remedies.

Of the local germicidal medicines used the chlorine mixture proposed by Prof. Waugh in "Hand-book of Treatment," and given on pages 456 and 457, Diphtheria Number of THE TIMES AND REGISTER, was the most satisfactory, notwithstanding the diffi-

culty of its administration. This preparation has proven to be very effectual in checking the spread of the membrane when it commences to form. In cases of doubtful diagnosis I always prescribed the prescription recommended by Dr. Hoadley (see THE TIMES AND REGISTER, page 801, 1889, and page 456 of Diphtheria Number) until the local symptoms were more fully developed, and in some cases no other local remedy was needed at all. But if the membrane continued to spread, I used other measures in conjunction with this. The peroxide of hydrogen was used, in the form of spray, in various strengths, every fifteen minutes to six hours, probably more than any other drug. Under its use the membrane very rapidly melts; but almost as quickly reforms, and, indeed, it seems sometimes to scatter it to uninfected parts. I consider the peroxide of hydrogen a very valuable remedy in its place; but I must say with Dr. Strock (page 453, Diphtheria Number): "That in a case of true diphtheria the peroxide of hydrogen apparently exerts no beneficial influence upon the course of the disease."

In cases when the membrane is very abundant and fills up the throat, and when it seems to linger after the other symptoms have subsided, the peroxide is very valuable. I have had ample experience with diphtheria, however, to convince me that patients early put and kept upon the chlorine and myrrh mixtures mentioned get along much better than do those who have to depend entirely upon peroxide of hydrogen to destroy the germs as fast as they accumulate in the throat.

Of these 30 cases there were 7 deaths, all of the laryngeal form, and 4 cases of paralysis coming on with convalescence.

Of the many articles on diphtheria that have appeared in THE TIMES AND REGISTER of late, why has nothing been said of turpentine as a prophylactic? I have great confidence in this medicine as a preventive measure.

JAS. F. HURD, M.D.

GALETON, PA.

LEG ULCERS.

A SHORT time ago I was called to see a lady suffering from ulcers on the limbs; the size averaging from that of a quarter of a dollar to a dollar. The limbs were both swollen to an enormous size. The patient could not bear the weight of her clothes on them. The ulcers first started as small pimples, then festered, breaking open and ulcerating. After making a careful examination and inquiry into the case, I found that there was no specific history of any kind; the patient was a woman forty years old, and of that class whose surroundings are not purely hygienic by any means.

I advised her to be put to bed, and her limbs thoroughly washed with an antiseptic solution, placing the limbs at rest, and ordered her to be placed on the following treatment. Internally:

R.—Hydrargyri chloridi corrosivi..... gr. viij.

Spiriti vini gallici..... f 3 viij.

M—Sig. A teaspoonful three times daily.

I also directed her to drink freely of sassafras tea. The following I ordered to be painted over the ulcers with a camel's hair brush:

R.—Tr. iodi,

Potassii iodidi..... āā 3 ss.

Glycerini..... f 3 viij. M.

This lady had been treated by a number of physicians for almost a year, and had received no benefit.

After using my treatment for two weeks the ulcers have become cicatrized, the swelling rapidly subsided, and the patient has entirely recovered. For the bowels I used Prof. Waugh's anti-constipation pill of aloes, belladonna, nux vomica and capsicum.

WILL EDGAR HOLLAND, M.D.

FAYETTEVILLE, Pa.

The Medical Digest.

DANDRUFF ERADICATORS.—The following formulæ and methods of treatment have been collated from a variety of sources.

[1]
Chloral hydrate..... 30 grains.
Glycerine..... 2 fl. ozs.
Bay rum 2 fl. ozs.
Tr. cantharides..... 1 drachm.
Rose water..... 8 fl. ozs.

[2]
Vinegar of cantharides..... 2 fl. drs.
Aromatic vinegar..... 2 fl. drs.
Sp. of rosemary..... 2 fl. drs.
Elder flower water... q. s. 4 fl. ozs.

Mix.

Sponge the roots of the hair well and brush with a moderately hard brush.

[3]
Ether..... 1 fl. oz.
Tr. of cantharides..... 1 fl. oz.
Alcohol 1 pint.
Oil of rose..... 5 fl.

Mix.

[4]
Borax 15 parts.
Glycerine..... 30 "
Decoction soap bark..... 50 "
Water..... q. s. 300 "

Mix.

This lotion is to be used at night and in the morning; rub the hair with the following pomade:

Tannin..... 2 parts.
Tr. of cantharides 5 "
Vaseline 50 "
Balsam of Peru..... 2 "
Oil of mace 1 part.

[5]
Precipitated sulphur (recently washed and dried)..... 1 drachm.
Refined sugar..... 1 "
Glycerine..... 4 drachms.
Rose water..... 1 pint.

Triturate the sulphur as finely as possible in the glycerine, then add the rose water, and lastly the sugar.

[6]
Carbolic acid..... 1 drachm.
Bay rum..... 2 pints.

Mix.

[7]
The following is given in Lillard's Practical Hints and Formulæ:

Chloral hydrate..... 2 drachms.
Glycerine..... 1 oz.
Bay rum..... q. s. 1 pint.

[8]
According to Dr. G. C. Stephen (*Chem. and Drug.*), the following treatment has been found very successful in Vienna:

Resorcin 60 grains.
Olive oil..... 1 fl. dr.
Sulphuric ether..... 1 fl. dr.
Alcohol 8 fl. ozs.

Mix and shake well before using.

Wash the head thoroughly with soap and water and apply the above lotion by means of a small mulcage brush, which should be insinuated between the locks and close upon the scalp.

[9]

Tr. of cinchona.....	1 oz.
Potassium carbonate.....	1 dr.
Solution of potash (5 per cent.)....	2 drs.
Cologne.....	1 oz.
Water.....	q. s. 8 ozs.

Mix and filter.

[10]

The following formulæ were taken from a correspondence in the *Brit. Med. Journal* by the *Chemist and Druggist*:

[a]

Ointment and nitrate of mercury...	1 dr.
Saxoline.....	7 drs.

Mix.

Cut the hair short and keep well brushed, and apply the ointment every night for a fortnight.

[b]

Red oxide of mercury.....	10 grains
Ammoniated mercury.....	10 "
Saxoline ointment.....	1 oz.

Mix and apply every night.

[c]

Corrosive sublimate.....	30 grains.
Glycerine.....	5 fl. ozs.
Cologne water.....	5 fl. ozs.
Water.....	q. s. 15 fl. ozs.

Mix to make lotion No. 1.

Beta naphthol.....	120 grains.
Alcohol.....	20 fl. ozs.

Mix to make lotion No. 2.

Salicylic acid.....	120 grains.
Tr. benzoin comp.....	20 fl. drs.
Olive oil.....	10 fl. ozs.

Mix to make lotion No. 3.

Wash the head thoroughly with terebene soap, rinse well and dry thoroughly; then rub in some of solution No. 1 and allow to dry; then use No. 2 in like manner, and finally apply No. 3. The treatment should be carried out daily for a month, and then every alternate day for a fortnight. The dandruff disappears in a few days, and the hair becomes vigorous and supple in a short time.—*The New Idea*.

THE PARTURIENT WOMAN'S BED.—Much has been said and written in the last few years regarding the question of antiseptic in midwifery practice, and yet, how little attention has been given to the proper arrangement of the parturient woman's bed, and to the dressing to be applied to the vulva after delivery.

The bed is ordinarily prepared by spreading a sheet of rubber or oil-cloth over the mattress, to prevent it from becoming soiled, while upon it is placed an old ragged quilt, which has seen so many years of service in various capacities as to be of no further use in the household, and, consequently, of so little value that it can be readily parted with and thrown away. Over the quilt may be placed several layers of old cloths which have been accumulating in a drawer up stairs for just such an occasion as this, and, musty and un-aired, are seized upon by the nurse, or the kindly assisting neighbor, to make a nice soft bed for the prospective mother. Finally, a sheet is spread over all, and the bed is ready for antiseptic midwifery. Worse than this is the feather bed, of so common use in the country. Now, feathers, you know, cost money, and the average feather bed is handed down from mother to daughter, and from daughter to granddaughter, and the feather renovator is an unknown quantity there. Grandmother was probably delivered of ten

or twelve children on that bed; mother, of as many more; all of the children had scarlet fever, the measles and mumps on grandma's feather bed; brother John, who had typhoid fever, and the husband, who just recovered from erysipelas, both used the good old feather bed, and it would be cruel to put the good wife, when she is to be sick so long, on anything but the soft feathers. A bundle of cloths from the drawer up stairs is placed on a chair, within convenient reach, the patient is put to bed, with perhaps a sheet pinned around her waist, her long night gown drawn up from under her hips, and all is in readiness for the delivery of another daughter to inherit that feather bed.

During the pains of labor the patient rolls and tosses, her night gown works down under her hips, the sheet around the waist slips up under her shoulders. She is delivered with a gush of water and blood; her night-gown is soaked and she is wet to the shoulders. Thus wet and cold she lies for half an hour or more, when the old quilt and rags are drawn away, some more rags from the pile on the chair are tucked under her, the wet night-dress is, after much trouble, removed and a roll of the same old cloths is placed against the gaping vulva, the swollen labiæ and the torn perineum.

By a little attention, on the part of the physician, to the preparation of the bed, many of the annoyances and dangers incident to parturition can be removed.

Commence with a good, firm mattress; eschew feathers. Cover the mattress, if you please, with a rubber sheet, and over it spread the cloth sheet. Have the patient wear, in lieu of a night gown, a short sack scarcely reaching the hips. After she takes her bed, place under her hips a pad of absorbent cotton, covered with cheese-cloth, about thirty inches square and one inch thick. Place a similar pad, folded, under the small of the back and resting upon the upper margin of the first pad.

The pad under the hips will absorb all the fluids incident to labor, while the one under the back will prevent fluid creeping up to the patient's shoulders. After labor, withdraw the pads. With them will come all the fluids, and the patient, with no annoyance or trouble, finds herself in a clean and dry bed. Now place a pad eighteen inches square under the hips, and one two inches in diameter and seven or eight inches long against the vulva, to absorb subsequent discharges. Burn the soiled pads; they are cheap. Pads or accouchement sheets can be purchased of the Hygienic Wood Wool Co., ready-made, as can the vulvar pads. The vulvar pads should be changed as soon as they become soiled. The large pad placed under the hips after delivery can remain for from twelve to twenty-four hours, after which time the vulvar pads will be sufficient to absorb all discharge.

In referring to the efficacy of these pads and sheets, Dr. Geo. H. Robe, Director of the Maryland Maternite, in a recent communication, says:

"The confinement pads were found to thoroughly absorb all the discharges without allowing any fluids to pass through to stain or even moisten the sheet underneath. Of course it is possible that in some cases, where the liquor amnii is in excess, the pad would not absorb it all, but no such case occurred among those with whom the test was made. The menstrual pads were used as vulvar pads after delivery. For the first two or three days the discharge rapidly saturated the pads, so that frequent renewals were necessary. After the third day, however, these pads answered admirably to absorb the lochial discharge. I

would suggest that a slightly wider and longer pad than the menstrual pad be made, to be used as a vulvar pad after delivery. This, it seems to me, would help along the cause of antiseptic midwifery, as any old rags are usually thought to be good enough to be used as vulvar pads."—*Amer. Gynec. Jour.*

DOSIMETRIC TREATMENT OF DIPHTHERIA.—*First Period: Period of Invasion.*—Generally characterized by a metallic cough, a modified voice, and redness of the face.

Prescription.—One granule of arseniate of strychnine every half hour, to prevent nervous prostration; one teaspoonful of Seidlitz-Chanteaud dissolved in a cup of very strong coffee, diluted with water to the extent of half its bulk. The child takes this in three times, once every hour, and likes it. If this first dose does not produce one or two actions of the bowels, it is repeated.

Second Period.—Characterized by fever, then by the frequent and characteristic cough, whistling respiration, bronchic râles, paleness of the face, small and very frequent pulse, and neck somewhat enlarged.

Prescription.—Two granules of arseniate of strychnine, every half hour, care being taken to watch the moment at which dyspnoea ceases. This is important.

If the heat goes beyond the physiologic average, the temperature is brought back to normal by one granule of aconitine, given every half-hour. As soon as the pulse and temperature begin to oscillate, I pass at once to hydro ferrocyanate of quinine and to the granules of sulphide of calcium, one of each every half hour.

If there are any diphtheritic plates on the tonsils, I destroy them with lemon juice in preference to any other caustic. During the whole time I am careful to keep up the strength of the patient with good wine and other tonics. If the patient does not take food easily, small enemata of soup with wine are administered.

I have quite abandoned the ordinary practice of inducing vomiting by emetic or sulphate of copper, which only depresses the patient and hastens death.

Since I have adopted the dosimetric method, I have had no occasion to proceed to tracheotomy, an operation which may sometimes prove useful when the physician is called in very late. But even if the operation prove successful, we must continue to combat the disease by the above means, and not cross our arms, as some of our colleagues appear to do, as soon as the operation is completed, and imagine all is done which can be done. We have seen cases of diphtheria in which the disease has progressed after tracheotomy has been performed.

—Sebastian, *Dosimetric Review.*

ASIATIC CHOLERA IN SYRIA.—The medicines and measures that have been used with success, may be divided under two heads—preventive and remedial. There are many prophylactic measures advised. Chills are to be avoided, also "drinking." This is considered more important than special care as to diet; only see that the food is clean and wholesome and kept covered from the air. Drinking-water should be boiled and kept in closed vessels. Any disorder of the alimentary canal should be carefully watched; but bear in mind that fear predisposes to the disease.

The antiseptic measures that have been used are chloride of lime, the burning of sulphur, and the making of great fires in open places (which, indeed,

is handed down to us by Hippocrates), the sprinkling of solutions of the sulphate of iron, carbolic acid and camphor, in streets and drains, etc., as needed. Most important of all, the dead are to be buried deep in the ground, with lime put over them, and a special cemetery provided, so that the ground shall not have to be opened again. Some think, however, that there is no danger of infection from the dead. The Sultan has offered £4,000 to provide a new burial ground outside Damascus for the present need.

It is said that lately in Damascus the people attacked some soldiers who were putting lime into a grave, over one who had died of cholera, and that thirty of the people were killed in the struggle; but I cannot vouch for this. The Governor is doing his best to keep the town clean and healthy, and to help the poor and destitute. Such a thing as this has not been known until the last two years or so.

The principal remedies that have been used are:—

For Sickness.—Equal parts of laudanum, tincture of cardamomseeds, tincture of capsicum, tincture of ginger-root. Twenty to fifty drops are given as needed, until vomiting ceases.

For the Diarrhoea.—Equal parts of spirits of camphor, tincture of rhubarb, and laudanum. Twenty to fifty drops are given as needed. In extreme cases, 100 drops may be used.

To quench the thirst, rather than much cold water, it is well to give teas, gum arabic, or rice-water to drink; sulphuric acid lemonade may be given, or chamomile tea.

Keep the body warm with hot-water bottles, apply mustard poultices to the epigastrium, and use friction to the extremities.

In Aleppo, as a preventive and also as a remedy, salol and quinine in equal parts have been used in 3-grain doses.

Absinthe has also been recommended by some physicians.

Our eminent physician, Dr. Vandyke, speaks in his "Arabic Pathology," of chloral as very successful, both by the mouth and as a subcutaneous injection.

—Manasseh, *The Satellite.*

TO HASTEN LABOR.—While giving the ether, in her writhing, she got crosswise on the bed, with her head toward the wall. I gave the towel cone, by means of which the ether was given, to the nurse, and, placing my hands well spread out over the fundus of the womb, I applied a gentle and continuous force in downward and backward pressure, while the pains were on, upon the womb and contents, in the line of the axis of the pelvis. When the pains ceased I stopped the pressure. As the patient made no complaint, I continued applying the force, gradually increasing it at each pain. After an hour or so, on making examination, I found that she was making progress, and the breech was engaging. I continued the application of this force, and after about three hours more of hard labor, on the part of the patient and myself, I had the satisfaction of knowing that the labor would terminate successfully.

Briefly, the method consists in applying a force synchronously with the natural labor pains, by and through the hands of the obstetrician, so spread as to embrace as large a portion of the fundus of the womb, as may be possible, and applied downward and backward in the direction of the axis of the pelvis.

The following are directions which should be remembered and followed in making use of this method:

1. As to the position of the patient. It can best be made use of when the patient is crosswise on the bed,

in nearly the same position as when the forceps are to be applied.

2. The hands of the obstetrician should be so spread as to embrace as large a portion of the fundus of the womb as possible.

3. The force should be applied when the pain commences, gently at first, gradually increasing it to the end of the pain and should cease with the pain.

4. The force must be applied downward and backward in the direction of the axis of the pelvis.

Finally, certain precautions should be borne in mind in the use of this method :

1. It should not be used unless the presentation is a safe or deliverable one.

2. It should not be applied spasmodically by jerks, but with a gentle, gradually increasing pressure.

3. It should not be used unless the os uteri is dilated or dilatable.

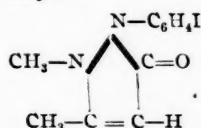
Following the above directions, and bearing in mind the cautions given, this method will, I am sure, be found of great value in difficult and retarded cases of labor, and for the average general practitioner safer than the forceps.

—M. L. Brown, *Boston M. & S. Journal*.

JODOPYRIN (JODANTIPYRIN).—The enthusiasm with which a few years ago the discovery of every new febrifuge was greeted, has given place, not without some justice, to an extraordinary indifference. It was soon recognized that morbid processes were not essentially affected by the reduction of the body temperature. Nevertheless the building up of each new combination of this class was watched with interest, because, on the one hand, we have not given up the hope of eventually obtaining in this way certain specific remedies, and on the other, the consideration of the chemical constitution of these bodies offered the possibility of coming at their method of action.

Next to antipyrin and antifebrin the pre-eminent antipyretics of late years, iodine belongs unquestionably to our most active remedies. It is, therefore, not uninteresting to make a study of the therapeutic actions of such combinations as contain antipyrin or antifebrin with iodine, and on the activity of such a body I have now to report.

Jodantipyrin is antipyrin in which an atom of hydrogen is replaced by iodine, *i. e.*, it is iodophenyl-dimethylpyrazolon $C_{11}H_{11}IN_2O$ and its chemical constitution is probably :



It crystallizes in colorless, lustrous, prismatic needles, is difficultly soluble in cold water and alcohol, more readily in hot; it is perfectly tasteless and without peculiar odor.

It should be further mentioned that a 0.2 per cent. solution of this body does not prevent the fermentation of grape-sugar. (Prof. v. Jaksch.)

The melting point of iodantipyrin is $160^\circ C$.

The compound was first prepared by Dittmar, but according to Dr. Ostermayer, by a different method to that used by himself.

I have studied the action of this substance principally on two types of fever, on typhus abdominalis, that acute infectious disease in which the curve of temperature is best known and characterized, and of which there was only too much material at hand, and

on the chronic form of an infectious disease, pulmonary tuberculosis. With reference then to the antipyretic activity of iodantipyrin, it entirely corresponds to that of the pure antipyrin which is readily intelligible from the chemical composition of the body. We may assume that in the case in question the body is decomposed by the hydrochloric acid of the stomach, so that the antipyrin action on the one hand, and the iodine, or rather sodium iodide, action on the other, came under observation.

According to my experience, the compound, in doses of 8 to 24 grains, produced an abatement in the temperature, accompanied by excretion of perspiration; in these doses it did not cause collapse and no shivering, as the temperature again rose to the former level.

Further, the majority of the patients felt subjectively better during the use of the remedy, and praised its effect without any suggestion. Pulse and respiration were slowed in accordance with the diminution of temperature. The pulse at the same time became somewhat fuller and the respiration deeper; it may be remarked, however, that the rate of respiration frequently diminished much less than that of the pulse, so that in this respect, perhaps, there is a slight lack of uniformity.

Examination of these experiments, shows the assertion made to begin with, that the antipyretic action of iodantipyrin corresponds with that of the pure base, is sufficiently justified. The question, however, now arises: Does iodantipyrin act as an antipyretic *per se*, *i. e.*, has the antipyrin molecule lost none of its activity by the introduction of an iodine atom, or is its efficacy dependent upon its decomposition into iodine and antipyrin?

The urine of all patients who were given iodantipyrin internally, always gave decided evidence of iodine by the usual method¹, and when they had taken 15 to 24 grns. of the remedy, antipyrin could also be detected, though only feebly, with nitrous acid.²

In a perfectly clear aqueous solution of iodantipyrin, the iodine test with nitric acid and chloroform gives negative results; reaction occurs, however, immediately if the solution or the nitric acid is heated, or after some time ($\frac{1}{2}$ hour) if the solution is allowed to stand with the acid. The iodine of the compound is therefore set free by the interaction of hydrochloric or nitric acid. The question is, whether the same effect is not produced in the human stomach. In reference to this I made two experiments:

A man of thirty-five years, with normal digestion, but suffering from *Tabes dorsalis*, was given 15 grns. of iodantipyrin internally. The gastric juice expressed three quarters of an hour later had an acid reaction to litmus, congo and benzopurpurin. In the clear filtrate an immediate and strong iodine reaction (with HNO_2 and $CHCl_3$) was obtained.

A man of twenty-four years, was given at 8 A.M. 18 ozs. of milk; three quarters of an hour later the gastric juice was expressed, and about 10 ccm. of a clear liquid containing free acid and a few flocks of casein were obtained. In this liquid iodantipyrin was placed, and after some time (about 1 hour) a strong iodine reaction was given by the filtrate.

The question stated above must therefore be answered as follows:

Iodantipyrin when given internally is slit up in the stomach into iodine and antipyrin, and, in the thera-

¹Jaksch: Clinical diagnosis. 2 Edition, p. 358.

²Huppert: Analyse d. Harns. 9 Edition 1890, p. 356.

peutical action of the body, we have to look for that of these two constituents.

In the experiments communicated, therefore, only the antipyretic action of one component of the body viz., of the antipyrin came under observation. I was not in a position to institute extended trials of the substance in syphilitic affections, in bronchial asthma, etc., but will allude very briefly, in conclusion, to two cases in which iodantipyrin seemed to me to be strikingly beneficial.

One of these cases was an official, J. K., of twenty-eight years, who was admitted to the clinic on February 24, 1890, on account of violent headache in the forehead and temples. During his military service the patient had contracted syphilis (hard chancre), and after three weeks' treatment was discharged from the garrison hospital. Healthy since that time, he was attacked in the new year by influenza, and had suffered since from the headaches above mentioned. Objective examination evidenced a completely sound condition of all organs, with no symptoms of generalized syphilis. On the day of admission the patient was given 15 grns. of iodantipyrin, and the next day felt so much better that he asked to be discharged.

The second case was a watchman, R. W., of twenty-four years, who came to the hospital on November 17, 1890, on account of polyarthritis acuta. The patient traced the beginning of his affection to November 12, when he felt pains in the right foot, which later were followed by local swelling. During the next day or two the left foot and both knee-joints became painful, so that the patient could only move with the greatest difficulty, and therefore sought the hospital. Examination revealed a normal condition of the internal organs; the first cardiac sound was somewhat impure, otherwise the sounds were generally well defined. Temperature of the skin 38.3°C .; the two ankle joints fairly and the knees considerably swollen with redder and warmer-feeling skin extending to the adjoining parts.

The movements of the temperature on the day after admission were:

18 Nov.	8 A. M.	12	2 P. M.	4	6	8
	37.2	38.3 ¹	38.4 ²	38.4	38.2 ³	37.8

The temperature subsequently remained perfectly normal; the most notable feature of the case was that the patient, six hours after taking the first dose (12 o'clock) was comparatively free from pain and able to move freely. Objectively he also felt much better. On November 19, a single dose of 15 grns. was given, and as the patient felt entirely well he was discharged on November 22.

Unfortunately I had too little of the remedy to be able to continue the experiments on rheumatics, and am well aware that it would be rash to draw conclusions from a single case; yet there is a prospect that the compound will be prepared, in the near future, on the large scale, by Hoechst manufacturers, and it will then be easy to determine with certainty its therapeutic effect in comparison with that of antipyrin and of iodine.

ELECTRICITY AS A GERMICIDE.—Has electricity germicidal power?

During the last decade the profession has been exercised terribly over the great germ theory, as explaining all that was before mysterious in demonstrat-

ing what causes disease; and we are gravely told that no abnormal action can by any possibility be induced to give us a chance to show our skill in the healing art, unless some of the members of this extensive horde of microscopic pirates will kindly open the way for us. Without giving my own views at present as to whether there is so much in this theory as some ultra-worshippers are inclined to claim, it is sufficient to state that, for the purpose of explanation to the laity, I think that in some instances germs are the cause and in others they are the results of disease. Whatever the real truth is, in this matter, it is abundantly evident that germicides (so called) are getting to be a big thing in our armamentarium against maladies of all kinds and conditions.

My plan of experimenting was this: Having selected a colony of germs, they were inclosed in tubes of varying size,—from that such as iron or other medicines are taken through to those of considerable length and diameter,—from two inches by an eighth of ten feet by an inch. The germs were contained in fluids such as bouillon, glyceroles, syrups, water, etc., and their activity was made apparent by the microscope before subjecting them to the current. At either end of the tube was a wire imbedded in the cork of vulcanized rubber, some of the wires being platinum and others copper. The forms of electric force used were currents from a thermopile, from a magneto-faradic machine; a galvano faradic apparatus, from primary batteries, arranged variously, in series and combinations, from a secondary accumulation; from Wimshurst and Toepler-Holtz static machines; and from dynamos for arc and incandescent lighting. Several types of the two latter were employed, wound for varying quantity and pressures. After subjecting the liquids to the current for a definite period of time, the contents of the tube were again examined microscopically, and notes made of the result, if any.

Thermo electricity was dropped as useless after a few trials. The static machine was employed by sending continuous showers with and without the condensers through the fluids, and using disruptive discharges from batteries of Leyden jars. The continuous flow and the heavy sparks acted alike; that is, they apparently destroyed the germs for a time, but without uncorking the tubes they reappeared. Strong doses from the Leydens did the business for the interlopers every time; and they kept quiet, no matter how long the tubes were left, if the corks were reliable. Faradism from any source destroyed the germs, and strong currents were needed. Bearable currents, however (and by that I mean such as we could endure, without too much inconvenience, for fifteen minutes, through the hands and arms), were of little account, except with the torula and sarcina ventriculi; but it seems to me that, although bad dyspeptics will do almost anything to secure relief, it would be wrong to send such strong voltage through their epigastriums, particularly as the solar plexus is so closely adjacent to the affected locality. Induction currents, then, may be set aside as of little reliability; that is, those used in medical apparatus. Galvanism readily destroyed all varieties of germs, from 25 to 175 milliamperes being required, and currents from all dynamos did so also. Strong currents, such as from 10 to 35 amperes, not only killed the enemy, but actually melted him out of sight. Quantity or amperage was the main essential; for low quantity, under strong voltage, was ineffectual; whilst high amperage, under comparatively low pressure, was efficient always. This might be inferred from the result of faradic experiment, hence,

¹ 15 grns. P. 86. R. 22.

² 8 grns. Perspiration.

³ P. 80. R. 26.

it is needful to use batteries giving good quantity; the chloride of silver elements would be useless, of course, although, for other purposes, I esteem Barrett's very highly. The comparatively high amperage required is not antagonistic in theory nor practice, for I found long-continued current; of safe quantity to be perfectly efficacious. Here the question is also that of time; enough coulombs would do the work. The time element ranged from that of instantaneous single sparks from the rods of the static machines, and similarly brief discharges from the Leyden jars, to a continuous flow of fifteen minutes; in the case of faradism from single make and break to an hour was employed; with galvanism and dynamo currents the period varied from a single second to six hours. I may here take the opportunity to enter a plea for the necessity of more attention to the use of the coulomb-meter, an instrument almost universally neglected by the electro-therapeutist. We should know equally how much electric force has passed as how strong in quantity or voltage it happened to be. And, whilst I am making suggestions, let me say that the storage battery should be carefully handled in such experimenting as that I am speaking of. This form of cell has a tendency, under short circuits (when low resistance is interposed), of personating somewhat the static phenomena, and things are apt to get too hot for comfort, if care is not observed. A secondary battery will unload itself in a big hurry, if it has half a chance to do so.

Having briefly stated what I did, how I did it, and what the result was in experimental work purely, I may say here that I have obtained satisfactory results in actual practice in a number of diseases known or believed to be due to germs or parasites, such as in scabies, lichen, favus, etc. In typhoid fever, in dysentery, in phthisis, in diphtheria, in intermittents, and in sporadic cholera I have had undeniable results for good, and in one case of cholera, which was fast going the wrong way under canonical treatment, with a consultant helping me, no sooner did I begin the application of galvanism to the abdomen than the cramp, the rice-water flow, and the algid tint of the skin began to leave, the woman doing well thereafter. And this is singular, when we remember the fact that electricity is a good thing to provoke intestinal contraction or peristaltic action. Maybe it contracted her so much that nothing could get up or down; anyhow, she got well.

I close the first part of my paper by saying that my object at present is not so much to tell what I have done in this direction as to suggest the desirability of gentlemen, whose ability is better than mine, taking up this matter, which, under proper investigation may produce meritorious results, because, if modern theories are correct, we are greatly more dependent thus far upon the amoebic warfare between pathogenetic bacteria and leucocytes than on drugs.

Having said this much on the first topic, I now turn to the other: Has electricity any action in producing poisonous results in food?

From the time when Eve began her dietetic inquiries in the mythical Garden of Eden till the present date, it has been the fashion to attribute to electricity the blame for all the internal upheavals, both of man and Nature. Earthquakes, boiler explosions, and threatened ruptures from excessive flatulence after the ingestion of canned salmon, fruits, and like comestibles, have all been ascribed by the laity to the mysterious operations of electricity. One of the latest demonstrations of this nature was stated by an article published in the *Philadelphia Medical Times*, in

August, 1887 (and the paper was reprinted essentially in the *Medical News*, in June, 1890), from the pen of Dr. George S. Hull, of Chambersburg, Pa. On a superficial view of its premises and conclusions, one would think the knotty problem solved; and, considering the lots of trouble which festive picnickers have had with their internal economy after spending the day playing copenhagen (whatever that may be), and gorging themselves with all attainable qualities and quantities of comestibles, with a view of getting as much, or more, out of their neighbor's basket as he does out of theirs, it would be a real blessing if we could fall upon the microbe which is responsible for the disastrous possibilities attendant on so many happy gatherings, and which, doubtless, prevents more picnics being held, and more nice young ladies going to those which are held in fear and trembling when the appetite for this toothsome delicacy is considered, and when we think of the tons of it which actually disappear from the face of the earth, anyhow!

The doctor holds that all freezers are galvanic cells, and that to this hitherto undetected fact the trouble is principally due. I have carefully repeated all his experiments, and added to them others of my own, with the purpose of getting at the bottom facts in the business, and first: the doctor claims to have found that a freezer filled with pure hydrant water caused a good galvanometer to undergo a deflection of 8 degrees; with sweet cream it ran down to 7; with sweet milk it jumped up to 40. Equal parts of cream and milk averaged the matter—the needle indicated 25; the addition of sugar and vanilla simply drove the record to 58; corn-starch, added to sweet cream and milk, raised it from 25 to 45; but eggs sent the index spinning up to 80. All mixtures, whatever their nature, when sour, went to 90, showing that acid had power to only add 10 degrees to the state of affairs under compounds of sweet cream, vanilla, milk and eggs—a curious anomaly. The doctor further suggests that salt is sometimes added to increase the flavoring, and that will produce zinc chloride, by action of the salt on the paddles. So far as this point goes, it is sufficient to state that the addition of 60 grains only of salt to 3 quarts of cream will not only prevent its being kept solid after freezing, or, rather, after the paddling ceases, for it won't freeze, but it will so affect the flavor as to spoil it in the case of any one except a person devoid of a palatal nerve, when sober; and, moreover, the amount of zinc chloride thus produced (the milk or cream being thoroughly sour), after the mixture has stood for six hours, is too small for detection by careful analysis. Should action be caused on the zinc of the stirrer or paddle by any means, the salt resulting would be the lactate of zinc, and this, although not much used nowadays, is sometimes given by myself in epilepsy, in doses of 10 grains four times a day, and without the slightest harmful result. Careful and repeated trials have shown me that galvanic action with zinc anodes, with any kind of cathodes, through lactic-acid solutions in varying amounts, is very low; with tin it was 2 milliamperes; with iron, 3; with copper, 6. The zinc freed into the electrolyte was always infinitesimal in amount, and we can understand, by referring to the slow destruction of our Leclanchés in a solution more active than the lactate (the ammonium chloride), how small must be the quantity of metal in such instances, and how very harmless it must be? The tin, iron, or copper forming the can is worn by abrasion, after awhile, of course, the scraper which takes the cream from the inside gradually rubbing it away; but then the salt thus made is of tin, which is perfectly innocuous.

Our own household apparatus has been in use for more than ten years, and has been used twice a week, at least, all that time; yet, in spite of hard usage, and with mixtures of plain and fancy creams and ices, many of which, in the summer, are acid in nature, the wear is hardly noticeable at present.

As I have said, lactic acid is the commoner one, found in milk and creams; the summer fruits are somewhat sour, but not much so, lemon being the principal one; the strawberry and raspberry, with banana, and the ices of orange, etc., being actually sweeter than the plain fruits themselves when frozen; they have shown not a particle of action on the zinc at any time with me.

When we remember that many more deaths have been traced to other confections than ice cream, namely, the delicacy known as cream puffs, which is not frozen at all, but which, on the contrary, is both boiled and baked at a high heat; and when we consider the fact that cheese has frequently produced the same poisonous symptoms as those from ice cream, we must look beyond electricity for the blame. No doubt exists in my mind that the entire trouble comes from the well-known "tyrotoxin" alone; yet there is sometimes danger from the eggs and flavoring materials. The methods of preserving eggs are various, "liming" being the commoner; the largely used "cold-storage," however, is widely practised, and, however fresh the eggs may look, they are often so ancient as to be venerable. Cheap confectioners use them freely, and much trouble has come from this source when used in cakes, creams and charlottes.

Then, again, just think of the gormandizing practised at weddings, parties and picnics! Nothing comes amiss to the participants in the way of feed, for feed it is, pure and simple; it isn't food. Why, the swill-tub in the morning hasn't the ghost of a chance alongside of the stomachs of the guests—raw, fried, scalloped, stewed and roasted oysters; raw and deviled clams; chicken, lobster and crab salads (and, it is shocking to tell, there are folks who, to save a trifle, will put in veal to stretch out the fowl in the salad). A farmer once told me that the only way some of his neighbors could utilize "dropped calves" which are miscarriages, near enough to term to stick together, was to sell them to the caterers. On top of this comes croquettes; then potted meats, ices and creams, sherbets, lemonade, wine and coffee, cakes, candy, and sometimes beer to drown the whole.

Moreover, the chicken is not always inspected by the Board of Health prior to being promoted to the dignity of assuaging the voracity of those who do without lunch, and maybe tea, too, so as to be in good shape for the battle in the dining-room of the generous host (or hostess) of the evening. Why should not some of these cormorants get sick occasionally? They do, and forthwith the ice-cream is blamed. Within my own personal knowledge, in some of the cases where poisoning followed banqueting, and where the ices were blamed, investigation proved that the victims had taken none of the creams at all.

Further (and this is an important point), a freezer is not, in its construction, a galvanic cell. The two metals, zinc for the paddle, or stirrer (that is, iron coated with zinc) and tinned metal for the can, are joined together closely at the top by the cog-gearing and at the bottom by the step in which the stirrer revolves; hence, there is a continuous circuit of metal, and no necessity exists for an internal circuit through an electrolyte. The cream undergoing freezing does

not endure the passage of any current at any time. This I have demonstrated over and over again in the actual facture of creams in our own apparatus, the current, if any, taking the path of least resistance, of course, which is round the metals. To make a galvanic cell of a freezer, the zinc would have to be thoroughly insulated top and bottom from the can and holder, just as the zinc is in any galvanic couplet; that is, the paddle would have to be held in a non-conducting collar, separating the can from it, either at the insertion of the paddle with the gearing, or between the can and cover; then, also the paddle would not be allowed to touch the bottom of the can, or it would have to be stepped in a non-conductor. No freezers are thus constructed, and the very slight local action which exists at any point where dissimilar metals touch in the liquids within the freezers is so slight as to be absolutely negligible. Still further in the line of objection to this theory of electrical poisoning, it is well known that for some years past all large makers of creams do not use the old fashioned revolving paddle; they beat the mass up with wooden paddles by hand in cans made of iron, usually, and lined with porcelain, such as we see in the ordinary household stewing utensils. When the mixture has attained a certain degree of stiffness, it is "iced-up," as the trade phrase goes; that is, the water formed by the melting of the salt and ice is poured off, and the can covered with clear ice, free from salt, and allowed to stand till solidly frozen, or till wanted for consumption. That dirty, unlined cans will set free a small amount of solder, zinc or tin, is possible; but few people, who employ unlined cans now, are so careless as to use them without their being thoroughly washed out before making the cream. It is also possible that when creams are permitted to stand a long time before consuming them, they may be contaminated by dirty cans; but the symptoms in all cases of sickness that have come before my knowledge have never been those of metallic poisoning at all. All my experiments were made with either our own apparatus, or that of well-known manufacturers; the test instruments were delicate, tangent galvanometers; the residual products were thoroughly tested by one or more pharmaceutical friends for metallic adulteration, and in none of them could an amount which would by any possibility be dangerous to even an invalid be detected. To study the effect of the current, *per se*, I sent through creams and fruit-ices at times currents ranging from 5 milliamperes to 35 amperes, and under pressures from 5 to 500 volts. The materials were never injured in the slightest; in fact, they were improved by the process, and a powerful current would not only prevent souring, but it would correct it if not too great. It is true that static electricity will cause milk and cream to sour, and I suppose this is due to the intense quantity of ozone set free in the vicinity of static machines, and in the air during thunder-storms.

Professor Tolemei, of Italy, holds the same opinion, as I see lately by a note in an electric journal, and he further says that milk treated by electricity will keep sweet for ten days or more, when otherwise it would sour in two. Dr. Henry McClure, however, in the *British Medical Journal*, thinks that the acidity in milk is caused not by the ozone, but by germs thrown down from the atmosphere, much as static electricity causes dust and fumes to settle in ducts used for making metallic oxides.

The varieties of creams and ices experimented with embraced the following: Creams—vanilla,

chocolate, bisque, banana, lemon, strawberry, raspberry, huckleberry (or whortleberry), orange, pistache and coffee. Ices—lemon, strawberry, orange, sherbet, raspberry, current (red) and raspberry vinegar, with enough jelletin to make it solid. All stood for six hours after paddling to harden, and all were eaten to the last spoonful by my family, occasionally assisted by friends. Now and then, what was left at dinner, or at tea-time, was consumed at either tea, or at bed-time, as the case might be. None of us ever suffered from the experiments any more than from other times when the diet was taken in the ordinary course of living. In fact, whilst these experiments were in progress, my folks, or those who assisted me, did not know they were engaged in this very laudable investigation.

Ice-cream is much more wholesome than is generally supposed, and it is more carefully made than is usually believed. A neighboring confectioner, whose family in many branches has for many years been prominently in the business, tells me that I am correct in my beliefs so far as the care is concerned, and that it is all nonsense to talk of putting salt and such matters as bad milk and sour cream, etc., into the mixture, as sour stuff will not freeze nor stay hard if it did freeze. The trouble, when there is any, which is very seldom, is entirely due, as he and I believe, to tyrotoxicon, which is an exceedingly complex poison, forming in a short time when milk or cream is exposed to damp, such as the "steaming" seen in cellars, arising from the ground after storms. It is associated with a large number of bacteria, and to this substance is often added other toxic germs, such as the "odium lactis," a penicilium, and the "bacillus cyaneus" (blue milk), together with others from diseases which are unknown to exist or purposely overlooked in the cow. Swill-fed animals are very liable to disorders of the intestinal canal, and their milk often suffers in quality and character under such conditions. Next comes the trouble from stale eggs, with now and then danger from the use of chemical flavors, such as oil of myrbane in lieu of almonds, and the like. Much of the trouble with children lately comes from the eating of candy thus flavored and colored with coal-tar products and terebinthates. Besides investigating the possibility of poison from ice-creams, I have looked into that supposed to come from various canned meats and fruits, and in none of them was there any reason to look beyond the spoiled substance itself; the cans were all right, so far as a careful chemical test went. Now and then chloride of zinc is used to hasten work by tanners who are not expert in fruit-canneries, in place of resin, but this is uncommon; most of all cases are due to imperfect sealing, which permits air to enter, and thereby causes decomposition, thus forming poisonous ptomaines (many kinds are innocuous).

In closing the second part of my paper, I have no hesitation in saying that I do not believe that electricity has any accountability in causing poisonous effects in food, and, with all due deference to Dr. Hull, I hold this to be especially so in the largely used, and very palatable delicacy to the fever patient—ice cream.—Blackwood, *Med. Bulletin*.

MARY PUTNAM JACOBI reported a very severe case of pneumonia in a child nineteen months old, with pleuritic effusion. Temperature, 106°; respiration, 72; pulse, 150. The treatment consisted of stimulants, cold packs, and oxygen inhalations. The child recovered, with empyema, necessitating an operation.

INTERNAL ANTISEPSIS.—A due consideration of the results attained by recent experimentation, a study of the clinical aspects of infectious diseases, together with some experience in their treatment, seem to me to warrant the following conclusions:

1. The internal use of germicides is valueless in most cases of systemic infection. While they may alleviate symptoms, they possess no curative properties.
2. Such agents have at times a beneficial effect upon acute gastro intestinal diseases, and are of some value in those of a more chronic nature.
3. Their remedial effects are not always due to their germicidal properties.
4. Systemic as well as local disinfection, when required, is effected far better by eliminatives than by germicides.—Berry, *N. E. Med. Monthly*.

DIRECT gastro-faradization proves to be useful in many ways in most chronic diseases of the stomach. The favorable results appear very clearly and pretty quickly in those cases of stomach dilatation which are not caused by any obstruction of the pylorus, but merely by the relaxation of the muscular coat of the stomach. Here the gastro-faradization is beneficial, no matter whether in these cases there is hyperacidity or subacidity of the stomach contents. Cases of relaxation of the cardia (eructations) and also of relaxation of the pylorus (presence of bile-secretion in the stomach) were very favorably influenced by faradization. Here the result was most markedly pronounced, inasmuch as, besides the subjective amelioration of the patient, the objective examination showed at the same time the absence of bile in the stomach-contents (there was, however, only one case of relaxation of the pylorus under observation).

Direct gastro galvanization was administered with very good results in cases of obstinate gastralgia; several of them had resisted every therapeutic means, but yielded to the influence of galvanization.

—Einhorn, *Med. Record*.

At the Obstetrical Society of London, Dr. Herman read a paper on "Backward Displacements," based on an analysis of 3,641 consecutive out-patients at the London Hospital. The author showed by figures that backward displacements of the uterus are more common in multiparous women than in those who have not had children; that they are more common in those seeking advice soon after delivery or abortion than in those not applying for treatment until long after childbirth or abortion; that they are more frequent among those in whom delivery or abortion has been followed by prolonged hemorrhage than in those in whom it has not; that prolonged hemorrhage after delivery or abortion is more frequent in cases of backward displacement of the uterus than in cases without such displacements; therefore that there is a relation between backward displacement of the uterus and prolonged hemorrhage after delivery and abortion. It was shown that these statements applied both to hemorrhage after delivery and to hemorrhage after abortion.—*Lancet*.

REMOVAL OF GASSERIAN GANGLION.—Mr. Rose removed the right Gasserian ganglion from a middle-aged woman. This time in operating he made one important change: instead of wiring back the divided piece of the coronoid process into its original position during the last stages of the operation, he resected it entirely, together with a small portion of the tendon of the temporal muscle. He did this be-

cause he had found in his previous cases a great deal of stiffness to remain in the lower jaw. He also altered slightly the spot for the application of the trephine, the instrument in this case being applied slightly anterior and a little external to the foramen ovale. With these two exceptions, the operation was performed in the same way as employed by Mr. Rose on former occasions; the zygoma being divided in two pieces (after having four holes drilled in it with the electric drill) and turned down with the masseter, the coronoid process cut through with the pliers and turned up with the temporal, the base of the skull was reached; the internal maxillary artery and its branches gave some trouble. Before the trephine was applied a piece of ligature was placed on the inferior maxillary nerve, below which the nerve was divided. By this means the nerve could be subsequently traced up to the ganglion. A small disc of bone was then removed from the situation already mentioned; that is to say, a little external and very slightly anterior to the foramen ovale, the edges of the circle being enlarged where necessary by an ingenious instrument devised by Mr. Rose for that purpose. The ganglion was removed more entire than on former occasions, long delicate forceps and a hook with a cutting inside edge being used. Mr. Rose said he always endeavored as far as possible not to interfere with the ophthalmic division; the dura was slightly opened. After the wound had been thoroughly washed out and the piece of the coronoid process cut away as mentioned above, the piece of the zygoma was replaced in its natural position and secured there by wires passed through the holes made at the beginning of the operation, and the external wound sewn up. The operation lasted a little over two hours.—*Med. Press and Circular.*

TREATMENT OF BUBOES.—McBurney divides his cases under three classes; those in which the glands are tender and hard without any sign of septic infection; those in which there are signs of gland deterioration, tenderness, redness, and softening; those in which the glands are completely broken down. Cases of the first class are treated by the application of cold. Those of the second are suitable for excision, all the glands being removed, and those portions of the skin which are badly involved in the inflammatory process. This treatment succeeds in proportion to the freedom of the glands from softening. It is in the third class of cases, in many of which excision is hopeless, that he has been led to adopt injections of iodoform and vaseline, as advised by Pontain. He has treated twenty cases. The method pursued was to make a small opening, through which the fluid is expressed. A small spoon is then introduced and dividing septa and connecting tissue bands broken down. The sac is then overdistended six to twelve times with a bichloride solution 1 to 1,000. Then by means of a syringe a mixture of iodoform and vaseline, a drachm to the ounce, which has been heated to fluidity, is injected. The application of a cold gauze compress causes the vaseline to harden in a few minutes. In two cases treated by him complete failure has resulted; in eight a partial success was secured, and in the remaining ten the success was complete after the first or second injection. Five had recovered before the fourteenth day, and the average duration of all was nineteen days.

NEW MEXICAN DRUGS.—*Pambotano*.—José Herles states that this plant, known in different parts of the country under more than a dozen names, belongs to

the *Leguminosæ*, family *Acaciæ*, genus *Inga* or *Calliandra* (Benth). The part used is the root. It contains a fat, a wax, an essential oil, two resins, a tannin giving a black precipitate with perchloride of iron, another tannin giving with the same reagent a dark-green precipitate, a glucoside, and salts. It is given in decoction for fever, eye diseases, opacities of the cornea, and leucorrhœa. This drug improves the appetite, cures diarrhœa and dysentery, loosens the bowels, is an expectorant, and is efficient in curing cough. Considerable attention has been drawn to this drug of late, on account of the report of Valude, read by Dujardin-Beaumetz before the French Academy of Medicine, in which the author says that pambotano infallibly, quickly, and permanently cures intermittent fever and chronic malarial affections.

Ponchilhuitz.—Manuel Sanchez reports on ponchilhuitz, which belongs to the *Apocyni*, family *Asclepias curassavica* (Linn). It grows in the hot lands of Southern Mexico. The infusion and decoction of this drug have a purgative action.

Tacopalle.—Juan Mota reports on tacopatlé (*Aristolochia Mexicana*). This plant grows in the hot lands of Southern Mexico. It contains an acid, a resin, a fat, an orange-colored pigment, a nitrogenous substance, a peculiar organic acid, starch, an essential oil, cellulose, lignose, and mineral salts. The drug in powder produces sneezing and inflammation of the nasal mucous membrane, when applied locally. It has emmenagogue properties, and is exhibited either in infusion or in tincture.—*The Satellite.*

TUBERCULOSIS AND THE COMMON EARTHWORM.—It will be recollected that in 1880 Pasteur showed that the common earthworm could become the receptacle or habitat of the bacterium of charbon, which was traceable to the cadavera of animals dead of this disease and buried in soil in the neighborhood of which the worm lived. The possible relations between the micro-organisms and these lumbricoids being thus established, MM. Lortet and Despeignes undertook some experiments with a view of elucidating a very probable connection between these same lumbricoids and the bacillus of tubercle. In the result these observers have satisfied themselves that these animals—so universal and active—can become the hosts of several months of the tubercle bacillus, which loses none of its virulent properties by its change of abode. It is obvious that under certain circumstances the earthworm might readily become a too efficient medium for the propagation of this scourge of mankind. The experiments of MM. Lortet and Despeignes have a further interest in being the first instance, I believe, on record in which the "tuberculization" of an animal belonging to the wide class of invertebrates has been demonstrated.

J. LEWIS SMITH states that the mortality of diphtheria in America is 140 to 100,000 of the population. He favors the use of the following inhalation:

R.—Acidi carbolici,
Ol. eucalypti..... āā f 3j.
Ol. terebinthinæ..... f 3viij.

M.—S. One ounce in a quart of water to be kept simmering on a stove in the sick room.

—*Atlanta M. and S. Journal.*

OPIUM POISONING.—Dawson (*Pacific Med. Jour.*) reports good results from the hypodermic injection of ether in a case of opium poisoning. A syringe of ether was injected into the arm, and repeated in an hour.

HICCUGH AND COMPRESSION OF THE PHRENIC.—A novel method of combating persistent hiccough was recorded by M. Leloir at a recent meeting of the Academy of Sciences. Some years back he was consulted by the parents of a little patient who was the subject for over a year before of a persistent and distressing hiccough, which recurred every half minute or so, and which had resisted every plan of treatment. M. Leloir then conceived the notion of compressing the phrenic, which he did between the sterno-clavicular attachments of the sterno-mastoid muscle. The compression was digital, and continued for three minutes, causing, however, considerable pain. As a result, the hiccough disappeared entirely, and has not recurred. Since then he has adopted the plan in several other cases of the kind, and always with complete success. The method is simple enough, and can be put in practice by any one, and is, besides its utility, interesting as an example of the successful application of the researches of Brown-Séquard on inhibition.

ANTIPYRIN IN ERYSIPELAS.—In the course of an epidemic of idiopathic facial erysipelas which visited the barracks at Syra, Dr. Fonstanos, medical officer to the hospital, was led to employ antipyrin in the treatment of cases of this disease, some of which were complicated by pneumonia. The results obtained by the method were so satisfactory and marked that he goes the length of speaking of the drug as a specific in this affection. Its action in lowering temperature was in these cases of erysipelas well brought out, and through this and the abundant perspiration which accompanied it a notable staying of the inflammatory process was very evident, due perhaps to the vigorous elimination by the skin of the streptococcus in great quantity. In every case during the epidemic in which recourse was had to the drug it did well, while complications were frequent in those in which other methods were employed. The dose, varying according to age and gravity of symptoms, was from twenty to sixty grains a day, divided in powders and taken at frequent intervals.

QUESTIONABLE FORMS OF LIFE INSURANCE.—Graveyard insurance, as it has been aptly called, has been stamped out by the courts and by legislative enactment in most of the States, so that it is no longer a common thing for companies to take risks on the lives of invalids and people in feeble health. There is, however, one branch of insurance still carried on, which is of very doubtful propriety, and while not very wide-spread, yet it is important enough to deserve the attention of the courts. This is the practice of insuring the lives of infants. This line of insurance is quite profitable, as the premiums are paid mainly by poor people, and in a very large number of cases the insurance is soon allowed to lapse, and then all previous payments become forfeited. The receipts of one company from this source were said to be \$9,400,000, out of which it had only paid about \$3,750,000. Another had \$4,440,000, and paid for death claims \$1,328,000.

It is questionable whether it is for the interest of the public to allow any insurance of the kind at all, and, at all events, it would seem that it should be limited to a comparatively small sum, sufficient to pay funeral and medical expenses.

There certainly is no sound principle making it desirable that a man should receive thousands of dollars on the death of his infant child. On the contrary, the possibility of such a result in the case of many

poor people burdened with numerous children will prove too severe a strain for weak morals. We would pity the innocent children in wretched tenements if it became a common thing for their deaths to bring a pecuniary benefit to their parents.

Legislatures ought certainly to put great restriction upon this kind of insurance.

—Riley, in *Med. Fortnightly*.

Medical News and Miscellany.

VACCINATION is now compulsory in Italy.

DR. L. A. SAYRE is said to be a victim of gout.

DR. THOS. B. EARLEY has removed to 1632 Green street.

THE Ohio legislature is struggling with a Medical Practice Act.

THE South American Medical Congress will be held in Cuba next October.

LADY BROOKE has endeavored to raise a fund to buy brandy for the poor, as a remedy for influenza.

PHYSICIANS have headed the list of suicides for the past ten years, and the proportion is said to be increasing.

SIR MORELL MACKENZIE, the great English laryngologist, died February 3, of tuberculosis of the lungs. He was a great man; of consummate ability in his specialty, with enough pluck for seven men.

DR. J. O. ROBINSON, of Bridgeport, Ky., states that antikamnia is composed of acetanilide and sodium bicarbonate, in equal parts.

Dr. Auld probably had in his mind this preparation, when he made up his tablets of acetanilide compound; consisting of acetanilide, gr. $\frac{7}{8}$; caffeine, gr. $\frac{1}{8}$, and sodium bicarbonate.

WEEKLY Report of Interments in Philadelphia, from January 30 to February 6, 1892:

CAUSES OF DEATH.	Adults.	Minors.	CAUSES OF DEATH.	Adults.	Minors.
Abscess.....	2		Gangrene.....	2	
Anemia.....	1		Inanition.....		4
Apoplexy.....	11		Influenza.....	8	2
Asthma.....	1		Inflammation, bladder.....	3	4
Bright's disease.....	11	4	" brain.....	4	4
Burns and scalds.....	1	1	" bronchi.....	5	17
Cancer.....	11		" kidneys.....	6	2
Casualties.....	7		" larynx.....	1	2
Congestion of the brain.....	1	3	" liver.....		1
" lungs.....	2	3	" lungs.....	39	39
Cholera infantum.....	1		" peritoneum.....	5	2
Cirrhosis of the liver.....	1		" s. & bowels.....	5	3
Consumption of the lungs.....	45	12	" uterus.....	1	
Convulsions.....	14		Insanity.....	1	
" puerperal.....	1		Intussusception.....	1	
Croup.....	11		Jaundice.....		1
Cyanosis.....	9		Leucocythemia.....	1	
Debility.....	7	3	Marasmus.....		12
Diabetes.....	1		Neuralgia of the heart.....	1	
Diarrhoea.....	1		Old age.....	17	
Diphtheria.....	29		Paralysis.....	5	
Disease of the brain.....	1		Pyæmia.....	1	
" heart.....	29	6	Rheumatism.....	4	
" kidneys.....	1		Sclerosis.....	2	
" spine.....	1		Septicæmia.....	3	
Drowned.....	1		Softening of the brain.....	2	
Dropsy.....	2	1	Suffocation, illuminating		
Dysentery.....	1		" gas.....		2
Effusion of the brain.....	1	2	Suicide.....	2	
Erysipelas.....	2	1	Tabes Mesenterica.....		
Enlargement of the heart.....	1		Tumor.....	2	
Elephantiasis.....	1		Ulceration, stomach.....	1	
Fatty degeneration of the			Uræmia.....	3	
heart.....	1		Whooping cough.....		3
Fever, scarlet.....	1	17			
" typhoid.....	9	6	Total.....	280	228

ONE thousand germs to a drop, is the condition of Cincinnati's drinking water, according to the *Ohio Medical Journal*.

PHYSICIANS can make a good record at the Health Office, by using a little care in filling up their reports of contagious disease. It is well to insert the address, which is sometimes omitted. The ward is rarely given; entailing a good deal of work upon the office and sometimes preventing the inspection of the premises, as there may be several streets of the same name, in different wards. Scarcely ever does the physician take the trouble to fill in the endorsement on the back of the report, though this should never be omitted.

MORTALITY OF THE STATE OF NEW YORK.—The reported mortality for December is 11,241, having risen from a daily average of 291 in November, the lowest of any month in the year, to one of 362. This is equal to that of July, and is only exceeded by April, when the daily mortality was 463, the highest on record for this State. Compared with December, 1890, the total mortality is about 2,500 greater; the infant mortality is about the same, and the number of deaths from zymotic diseases greater. Measles and whooping-cough caused fewer deaths than in December, 1890; scarlet fever and diphtheria considerably more, both being also increased over the preceding month of November. Scarlet fever is reported from 45 localities, causing 246 deaths; diphtheria from 98 localities, causing 725 deaths. Typhoid fever was reported from 71 localities and caused 183 deaths, the smallest number for four months. The great increase over the average mortality for December is in acute respiratory diseases, from which cause there were 1,000 more deaths than in December, 1890, and in diseases of the digestive, urinary, circulatory and nervous systems, in each of which there is an increase of between 100 and 200. There were also about 300 more deaths from old age. The increase, amounting to about 2,500 deaths, is mostly attributable to influenza (grippe), from which, outside of the large cities, only about 500 deaths were reported as wholly or partly due. It is not reported separately from the impossibility of reaching all deaths traceable to it. It is safe to say that 2,000 deaths were from this cause.

There have been 123,878 deaths reported during the year in the *Monthly Bulletin*, besides 4,200 deaths reported too late to be included in the *Bulletin*. It is estimated that 500 deaths occurred in 15 localities, aggregating 30,000 population, which failed to make any returns, making the total number of deaths 128,578 in the State for the year. This makes the death rate for the year 21.43 per 1,000 population.

The zymotic death-rate for the year is 178.00 per 1,000 deaths from all causes; for the first six months of the year 127.17, for the last six months, 229.76. This is lower than the average for five years, which is 193.00, but is a little higher than that of last year (169.00) with which it is more properly compared, the proportion being disturbed by epidemic influenza, not recorded separately and not included among these diseases, and which is estimated as having caused 8,000 deaths during its prevalence in March, April and May and 2,000 on its reappearance in December, making 10,000 deaths from this cause during the year, or double those of 1890. It was distributed uniformly through all the Sanitary Districts. Zymotic diseases, aside from grippe, caused 22,000 deaths, 2,300 more than in 1890, and about the same as in 1889. Small-pox caused 5 deaths, one in Jamestown

in January, one in New York in April, and three in Seneca in November. Typhoid fever caused 1,926 deaths (1,612 in 1890). Diphtheria caused 5,072 deaths (4,915 in 1890). Diarrhoeal diseases caused 9,179 deaths (8,468 in 1890). Scarlet fever caused 2,254 deaths (913 in 1890, which was very much less than in the two years preceding). Measles had about the same mortality as 1890, and whooping-cough very much less. From consumption there were 13,445 deaths (13,831 in 1890), and acute respiratory diseases 20,697 (18,053 in 1890), both years being greatly in excess of previous years. There was also a large increase in the mortality from all local diseases.

—*Bulletin, New York State Board of Health.*

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